

CAREER DECISIONS: AN EXAMINATION OF INFLUENCES ON
SELECTION OF DIETETICS AS A PROFESSION

by

JANET LYNN HELM

B.S., Kansas State University, 1979

A MASTER'S THESIS

submitted in partial fulfillment of the
requirements for the degree

MASTER OF SCIENCE

Department of Dietetics, Restaurant
and Institutional Management

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

Approved by:


Major Professor

A11202 961342

ACKNOWLEDGMENTS

I feel truly fortunate to acknowledge, at least for the first time in writing, the following list of people--all individuals who contributed so graciously to this research project and who deserve recognition for their role in assisting with the completion of this thesis. To you, Dr. Allene Vaden, my major professor and strongest source of academic and personal encouragement, I give thanks not only for your tireless efforts in the completion of this project (during a remarkably hectic summer), but for your continual support and "mentoring" throughout my two years at Kansas State. Gratitude also is extended to the remaining members of my research committee: Dr. Donald Hoyt and Dr. Marian Spears. Thanks to both of you for your special contributions.

I also am grateful to Dr. Arthur Dayton for his statistical assistance and to the individuals who provided such competent technical assistance. Thank you Nedra Sylvis, Janet Bosomworth, and Monika Harry for your hard work.

I also am indebted to my friends and fellow graduate students in the Department, especially to Sharon Hearne and Patti Simonis. Sharon, we traveled down the road of academe and survived it together; thank you for your special way of unselfishly providing moral support to me when we both needed it so much! Thanks to you, Patti, for your guidance and assistance, for "showing me the ropes" as a new student, and for always seeing the positive side of every situation.

Also, to my family and to Larry Bonander--I appreciate your continual interest in my activities and your consistent encouragement. I am

grateful for the confidence that you all had in me. A special thanks to Larry, who assisted in this project in many steps along the way.

And last, I give sincere thanks to the dietetic program directors who agreed to assist with the study and to the many dietetic students and interns who completed the research instrument. Your cooperation made this study a success.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	viii
INTRODUCTION	1
REVIEW OF LITERATURE	4
Theories of Vocational Choice	4
Trait-and-factor Theories	4
Client-centered Theories	6
Psychodynamic Theories	7
Developmental Theories	8
Behavioral Theories	14
Structural Theories	15
Women and Careers	18
Career Development of Women	18
Career Orientation of Women	21
Female-dominated Professions	25
Home Economics	26
Dietetics	30
Career Decision Making and the Factors Influencing Career Development	32
Parental Identification	32
Father's Influence	35
Mother's Influence	37
Mother's Employment	38
Mother's Role Innovativeness	39

	Page
Mother's Education	40
Reference Groups	41
Peer Influence	41
Male vs. Female Peer Influence	43
Faculty and Professional Role Model Influence	44
Work Experience	47
Vocational Guidance Counselors	48
Personal Influence	52
Personality Needs and Work Motives	52
Males vs. Females	54
Traditionals vs. Nontraditionals	60
High Achievers vs. Low Achievers	62
Perceived Benefits	63
Exchange Theory	63
Expectancy Theory	64
METHODOLOGY	67
The Study Sample	67
Instrument Development	68
Preliminary Instrument	68
Final Instrument	69
Part I	69
Part II	70
Part III	72
Part IV	74
Part V	74
Parts VI and VII	76

Distribution of the Instrument	77
Data Analyses	78
RESULTS AND DISCUSSION	92
Background and Characteristics of the Study Sample	92
Career Selection	100
Time of Career Selection	100
Academic Courses Influencing Career Choice	103
Sources of Influence	105
Experiences Influencing Career Choice	114
Considerations Influencing Career Choice	120
Value Influences on Career Choice	124
Characteristics Important in a Career	128
Important Career Characteristics	128
Career Importance Scores	132
Potential Sources of Career Satisfaction	138
Sources of Potential Satisfaction	138
Potential Career Satisfaction Scores	142
Professional and Career Involvement and Identification	150
Professional Involvement	150
Career Involvement	152
Professional Identification	154
Career and Educational Plans	161
Initial Job Preference	161
Plans for Graduate Study	163
Expected Employment Pattern	166
Long-term Career Objectives	167

SUMMARY AND CONCLUSIONS	181
Summary	181
Background and Characteristics of Respondents	183
Career Selection	184
Influences on Career Choice	186
Potential Sources of Career Satisfaction	187
Commitment to Dietetics	187
Career and Educational Plans	188
Comparison of CUP Students vs. Interns	189
Effects of Professional Identification	190
Effects of Home Economics Orientation	191
Conclusions	192
REFERENCES	198
APPENDIXES	211
A. Initial Mailing to Program Directors Requesting Participation in Study	212
B. Follow-up Correspondence to Program Directors Regarding Participation in Study	220
C. Pretest Evaluation Form	223
D. Final Research Instrument	225
E. Correspondence to Program Directors with Research Instruments	232
F. Follow-up and Acknowledgment Correspondence to Program Directors	235
G. Supplemental Table (Table 49)	238

LIST OF TABLES

Table	Page
1. Dietetic program participation and return of research instrument	78
2. Computation of scores	79
3. Principal component analysis and reliability of career importance items	84
4. Principal component analysis and reliability of career satisfaction items	86
5. Summary of data analyses	88
6. Characteristics of the study sample	93
7. Size of high school graduating class of dietetic students/interns	94
8. Percentage of dietetic students/interns who completed selected high school courses	96
9. Grade point average (GPA) in high school and college of dietetic students/interns	97
10. Selected high school activities of dietetic students/interns	98
11. Selected college activities of dietetic students/interns	99
12. Time of selecting dietetics as a career choice in relation to initial choice	101
13. Career selection of dietetic students/interns	101
14. Previous career choices of later selectors	102
15. High school courses influencing selection of dietetics as a college major	104
16. College courses influencing selection of dietetics as a college major	104
17. Sources of influence on selection of dietetics as a career	106

Table	Page
18. Effects of selected variables on ratings of sources of influence on decision to select dietetics as a career	109
19. Education and occupation of parents of dietetic students/interns	112
20. Mother's employment status and pattern of dietetic students/interns	113
21. Family members of dietetic students/interns in a health-related profession	115
22. Experiences influencing decision to select dietetics as a career	116
23. Effects of selected variables on ratings of experiences influencing decision to select dietetics as a career	118
24. Considerations influencing decision to select dietetics as a college major	121
25. Effects of selected variables on ratings of considerations influencing decision to major in dietetics	123
26. Value influences on decision to select dietetics as a career	125
27. Effects of selected variables on ratings of value influences on decision to select dietetics as a career	127
28. Important characteristics of a career identified by dietetic students/interns	129
29. Correlation of career importance factor scores	135
30. Effects of selected variables on career importance factor scores	137
31. Potential sources of career satisfaction in the dietetic profession identified by dietetic students/interns	139
32. Correlation of potential career satisfaction factor scores	144
33. Correlation of career importance and potential career satisfaction factor scores	145

Table	Page
34. Effects of selected variables on ratings of potential satisfaction in dietetics	148
35. Responses of dietetic students/interns on professional involvement items	151
36. Responses of dietetic students/interns on career involvement items	153
37. Effects of selected variables on ratings of career involvement measures	155
38. Responses of dietetic students/interns on professional identification measures	156
39. Correlation of selected scores	160
40. Effects of selected variables on ranking of preferred area of dietetic practice for initial job	162
41. Educational plans of dietetic students/interns	164
42. Primary area of academic interest of dietetic students/ interns planning to pursue graduate study (N = 1517)	165
43. Anticipated employment status of dietetic students/ interns	167
44. Degree of appeal of various career opportunities as a long-term career objective for dietetic students/interns	168
45. Effects of selected variables on ratings of the appeal of various areas of practice as long-term career objective	174
46. Correlation of career interest scores	177
47. Correlation of career importance and career interest scores	179
48. Correlation of potential career satisfaction and career interest scores	180
49. F values from analysis of effects of independent variables on research measures	239

INTRODUCTION

An occupation is a major focus of people's activities, and usually their thoughts, according to Roe (1), who stressed the importance that work has in the satisfaction of basic human needs. In our society, work is the single situation most capable of providing some satisfaction for all levels of needs. According to Tittle (2), a better understanding of career choices and perceptions is needed because knowledge of the values directing these choices and perceptions can foster self-knowledge of individual decisions.

As Dawis and Lofquist (3) stated, the choice of a career is one of the most important decisions made by an individual. Despite this truth, many people make their choice without knowing enough about their career potential or the opportunities for satisfaction that different careers offer. Ideally, the individual should know what characteristics are relevant for the career, both for satisfying demands of the job and for meeting requirements the individual has of the job.

Van Maanen and Schein (4) listed two major reasons for studying careers. First, and perhaps of most importance, the career concept is central to an understanding of individual identity. The second reason revolves around research into the nature and workings of complex organizations. A better understanding of organizations is possible, they stated, with a basic conception of the values, beliefs, and cognitive styles of people staffing the organizations, all of which are related to the training and subsequent careers of individuals. Hall (5) suggested a connection between career effectiveness and organizational effectiveness. The more

effective the careers of an organization's employees, the more likely the organization is to reach its objectives.

Having insight into the factors influencing the choice of a particular career can aid the recruitment effectiveness and career guidance for that profession. Townsend and Mitchell (6) conducted a national survey to determine how occupational therapists became interested in the field. Results revealed that personal contact was the most effective means of recruitment. Aide and volunteer positions were the second most effective technique. These findings led to recommendations to guide, develop, and maintain public relations and recruitment efforts for the profession.

The American Dietetic Association has long had an interest in manpower issues (7). The prime focus of the organization's manpower concerns has been the development of a work force population through recruitment and education, thus assuring a supply of adequately trained and competent dietetic personnel. Few studies, however, have examined the career choice process in the field of dietetics. Stone et al. (8) used a sample of young dietitians, or those less than 30 years of age, to study the factors affecting career choice and career satisfaction. Nippo (9) administered a questionnaire to dietetic students at the University of Rhode Island to study the factors influencing their choice of a career.

The overall objective of the current research was to study career selection and related variables among dietetic students and interns. Specific objectives were to (a) investigate factors influencing selection of a career in the dietetic profession, (b) measure levels of professional identification and commitment, (c) assess career aspirations, (d) identify aspects important in a career and potential sources of career satisfaction in dietetics. The instrument used in the study was based on that used by

Stone et al. (8), augmented by questions adapted from other related studies (6, 10, 11).

Much of the research cited in the review of literature examined women and careers, as dietetics can be labeled a female-dominated profession (12-14). Studies of female career choice often divide women into those who selected a male-dominated profession versus those who opted for a traditionally female field. Home economics, also a female-dominated profession (12), was included in the literature review, because most undergraduate dietetic programs are associated organizationally with a home economics academic unit. Also, an additional purpose of the study was to identify the home economics orientation of the dietetic students and to examine the results in relation to the findings of Aadland et al. (11), who studied the similarities-dissimilarities among students enrolled in home economics. They found that foods and nutrition students were least likely to have been involved in high school home economics-related activities and to consider high school home economics teachers influential in their career choice; these two factors were, however, influential for students in home economics education and general home economics. Other issues included in the review of literature were theories of career choice and factors influencing career decision making.

REVIEW OF LITERATURE

Theories of Vocational Choice

Various authors have organized vocational choice theories in different ways. Van Maanen and Schein (4) described the theoretical statements using two main categories: the differentialist view, which places primary emphasis on individual differences (the diversity of talents, abilities, and psychological endowments among people), and the developmental perspective, which implies that occupational choice is not something that occurs at a specific time, but rather it represents an evolving sequence of individual decisions. Super (15) described three categories of vocational choice theories: those that match people and occupations, those that describe development leading to matching, and those that focus on decision making. Osipow (16) categorized theories under the following headings: trait-and-factor, sociological, developmental/self-concept, personality, and behavioral. Weinrach (17) reduced the number of categories to two: structural and process approaches. Crites (18) organized existing theories into nonpsychological, psychological and general theories. In a subsequent work in 1981, Crites (19) assigned the major theories into five categories that he labeled trait-and-factor, client-centered, psychodynamic, developmental, and behavioral.

Trait-and-factor Theories

Based upon the psychology of individual differences and the analysis of occupations, trait-and-factor theories of vocational choice emphasize the relationship of an individual's personal characteristics to his or her

selection of an occupation (18). In his early formulation of what has become trait-and-factor theory, Parsons (20) described three broad factors of a wise career choice: (a) a clear understanding of self, aptitudes, interests, ambitions, resources, limitations, and their causes; (b) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and prospects of different lines of work; and (c) true reasoning on the relation of these two groups of facts. The trait-and-factor approach assumes that a straightforward matching of an individual's abilities and interests with career opportunities can be accomplished, thus solving the problems of vocational choice for that individual (16). Super (15) described these theories as matching theories, which he subdivided into three main types: differential--focusing on aptitudes or personality traits; situational--stressing the socio-economic structure, the individual in his/her social context, or the socialization process; and the phenomenological--stressing self-concepts and congruence theories.

The trait-and-factor model for vocational counseling is characterized by discovering individual traits or characteristics, analyzing occupational requirements (factors), and matching the individual with the occupation (21). Interest inventories like the Strong Vocational Interest Blank (SVIB), Strong-Campbell Interest Inventory (SCII), Kuder Occupational Interest Survey (KOIS), Jackson Vocational Interest Survey (JVIS), and the Self-Directed Search (SDS), and aptitude tests such as the Differential Aptitude Test (DAT), General Aptitude Test Battery (GATB), and the Scholastic Aptitude Test (SAT), are based on the trait-and-factor stream of thought.

The methods used by trait-and-factor career counselors--interview techniques, test interpretations, and occupation information--were described by Weinrach (21) as didactic and directive. Because the trait-and-factor approach views human beings as rational, Weinrach stated, it assumes that the career choice an individual makes will be based on true reasoning and will not be affected by irrational factors. The matching phase is highly pragmatic, he concluded; in essence, it is the filling of round pegs into round holes and square pegs into square holes.

Client-centered Theories

The rigidity of matching individuals with occupations and the popularity of the nondirective approach of client-centered theories contributed to the decline of the trait-and-factor approach (21). The critics contended that occupational groups are too heterogeneous in their duties and tasks to identify the traits and factors that differentiate them (18). Furthermore, the search for occupational differences obscures the importance of the series of choices that precede actual entry into an occupation.

Emphasis shifted from vocational guidance through testing to counseling for personal development. Client-centered counselors rejected the trait-and-factor approach with its emphasis on assisting clients in their cognitive development and began helping clients explore their feelings (21).

Rogers (22) asserted that client-centered counselors assume that all clients have the same problem: a lack of congruence between perceptions of self and perceptions of reality. According to Rogers' "self theory," the accurate perception and subsequent integration of social expectations with personal values are essential to adaptive development. If sex role

stereotypes do not correspond with what people think of themselves, what they think others want them to be, or what they ideally would like to be, then, according to Rogerian theory, psychological conflict results. Rogers further stated that conflicts between personal goals and social norms are least likely to occur for flexible individuals who can find a variety of ways to integrate personal needs and social demands. The goal of client-centered counseling, therefore, is the identification and resolution of these conflicts.

Psychodynamic Theories

The psychodynamic theories propose that the most significant factor in the making of a vocational choice is a motivational or process variable (18). For this reason, they contrast sharply with the trait-and-factor theories, which emphasize observable characteristics of the individual and not the inferred states or conditions that prompt one's behavior.

The major contribution to a psychoanalytic interpretation of career choice came from Brill (23). Basic in the system of psychoanalysis is the mechanism of sublimation, in which socially unacceptable motives are changed in form (sublimated) into socially acceptable behavior. Brill proposed that individuals' personalities and impulses lead them to choose a career in which they may satisfy, through sublimation, their basic life impulses. According to Brill, unconscious motives underlie all behavior, including vocational selection. Occupations are chosen, he asserted, as general or specific sublimations of fundamental instinctive wishes or needs.

Brill (23) documented his position by reporting several cases in which he personally observed the role that occupation plays in the

gratification of impulses. To illustrate the role of psychopathological tendencies in career selection, Brill suggested that sadistic impulses may be satisfied in such diverse activities as those of butchers, surgeons, and murderers. Ginzberg et al. (24) criticized psychodynamic theories because they disproportionately emphasize internal factors as the most salient ones in career choice and minimize external ones.

Bordin (25), who has been the principal theorist in defining psychodynamic career counseling, proposed a "centralist principle," stating that an individual consists of systems of motives that are relevant to a wide range of his/her behavior. These systems take form developmentally and are influenced differentially by parental pressure at successive stages in the psychosocial process.

In reviewing the psychoanalytic conceptions of career choice, Osipow (16) suggested that the analytical approach is difficult to apply to vocational counseling and it plays only a minor role in vocational psychology. Some aspects of psychoanalytic theory are more relevant to vocational choice and have been given more attention, he stated. For example, the process of identification, with whom the individual identifies, to what extent, and whether conflicts arise in the individual with respect to this person are very important in vocational behavior. Another mechanism of significance in vocational development is ego strength, the role the ego plays in influencing the field chosen, the persistence of the choice, and the degree to which its strength plays a role in the successful implementation of a choice.

Developmental Theories

Most trait-and-factor and psychodynamic theories of vocational choice have assumed that career choice takes place at a given point in time

rather than over a period of time (18). In contrast, developmental explanations of career choice propose that the decisions involved in the selection of an occupation are made at a number of different points in the individual's life and that they constitute a continuous process that starts in childhood and ends in early adulthood. Weinrach (17) classified this approach under the category of process theories.

This concept had its origin in the early work of Carter (26) on the formation of interest patterns of adolescence, which, he concluded, are solutions to the problems of "growing up." According to Carter, interest patterns are designed to assist individuals to fit themselves, with their biological attributes, into somewhat rigid social structures or institutions. One acquires interest patterns through the identification with some respected group or person. In Carter's formulation, the trial-and-error process of developing an interest pattern is one that progresses from the less mature fantasy solutions of late childhood to the more realistic solutions of youth and adulthood.

Osipow (16) used the designation "self-concept theory" to describe the developmental approach to vocational choice. The central theses of the approach, as outlined by Osipow, are as follows: (a) individuals develop more clearly defined self-concepts as they grow older, although these vary to conform with the changes in one's view of reality as correlated with aging; (b) people develop images of the occupational world, which they compare with their self-image in trying to make career decisions; and (c) the adequacy of the eventual career decision is based on the similarity between an individual's self-concept and the vocational concept of the career he/she eventually chooses.

The research team of Ginzberg et al. (24) collaborated to produce a rationale describing vocational choice that exerted a profound influence on vocational psychology during the decade following its publication in 1951 (16). The work was the result of an empirical investigation of New York City adolescents that was intended to establish generalizations about the types of occupational choices students make before and after college (24). The theory consisted of three propositions about the developmental nature of vocational choice. First, their data indicated that career choice is a process that spans the entire period of adolescence, from about age 10 to 21. The process does not involve a single decision, but a series of decisions with each step in the process having a meaningful relationship to those preceding and following.

Second, this process is largely irreversible. Once launched upon a particular course of action, such as training for a specific job, it is difficult to change these goals as time passes. They asserted that each decision made during the process is dependent on the chronological age and development of the individual. The entire process of decision making cannot be repeated and later decisions are limited by previous decisions such as expenditure of effort and money and commitments of time. As a result, they stated, the single most important factor in the vocational choice becomes the inertia of the decision-making process itself.

Third, the process ends in a compromise between an individual's needs and the realities that impinge upon him or her. Even for those who are in extremely favorable reality circumstances, Ginzberg et al. (24) maintain that vocational choice involves some element of compromise, some concession to the limitations of environmental conditions. Throughout the years of development, the individual has been trying to learn enough about his

or her interests, capacities, and values and about the opportunities and limitations in the real world to make an occupational choice that will yield maximum satisfaction.

Ginzberg and associates (24) found that the process of occupational decision making could be analyzed in terms of three major periods: fantasy, tentative, and realistic. The periods are differentiated by the way an individual translates impulses and needs into an occupational choice.

In the fantasy period, from childhood to age 11, a child thinks about an occupation in terms of a wish to be an adult. The child cannot assess his capacities or the opportunities and limitations of reality. Translations are arbitrary and the individual believes that he or she can be whatever he/she wants to be (24).

The tentative period, ages 11 to 17, is characterized by the individual recognizing the problem of deciding on a future occupation. During this period, the translation is still almost exclusively in terms of subjective factors: interests, capacities, and values. Ginzberg et al. (24) found that as most individuals reach the end of this period, they recognize their approach has been too subjective. They, therefore, consider their choices tentative.

The realistic period, which begins at about age 17 or 18, is composed of stages of exploration, crystallization, and specification. Crystallization is characterized by the emergence of some clear vocational pattern based on the successes and failures the individual experienced during the exploration stage. Once crystallization is complete, it leads to specification--the individual chooses a position or a professional specialty and the process is complete (24).

The authors of the theory concluded that four important ingredients contribute to the adequacy of an individual's occupational choice process during adolescence (24). These are reality testing, the development of a suitable time perspective, the ability to defer gratifications, and the ability to accept and implement compromises in their vocational plans. The research team also found that a child's ability to identify with suitable models at appropriate times was a critical feature in the career development process. In addition, they suggested that two basic personality types exist with respect to work: the work-oriented person and the pleasure-oriented person.

Super (27, 28) placed even more emphasis than Ginzberg et al. (24) upon vocational choice as a process and suggested that the term "development" be used rather than "choice" because it comprehends the concepts of preference, choice, entry, and adjustment. Super introduced the concept of vocational maturity to denote the individual's degree of development from the time of early childhood fantasy choices to decisions about retirement from work in old age. As the individual matures vocationally, he or she passes through a series of life stages, each of which corresponds to some phase in the development of his or her self-concept or personal orientation.

This process of change is characterized by stages of growth, exploration, establishment, maintenance, and decline. These stages are subdivided into the fantasy, tentative, and realistic phases of the exploratory stage, and the trial and stable phases of the establishment stage. The nature of the career pattern (i.e., the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socioeconomic level,

mental ability, personality characteristics, and by the opportunities to which he or she is exposed (27, 28).

The process of career development, Super (27, 28) asserted, is that of developing and implementing self-concepts; it is a synthesizing and compromise process in which the self-concept is a product of the interaction of inherited aptitudes, neural and endocrine makeup, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with the approval of superiors and fellows. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for abilities, interests, personality traits, and values. They depend upon establishment in a type of work, a work situation, and a way of life in which he or she can play the kind of role that growth and exploratory experiences have led him or her to consider congenial and appropriate.

According to Super's (27, 28) theory, often called the self-concept implementation theory, the individual's final career choice reflects the thoroughness with which he/she has implemented his/her self-concept into the world of work. The decision-making process, he asserted, is a unidirectional process in which increases in vocational self-concept crystallization increases the probability of making a satisfactory vocational decision.

More recent investigations have provided support for this belief. Barrett and Tinsley (29), for example, reported evidence that the frequently documented relationship between self-esteem and the ability to make a satisfying vocational decision is a function of the vocational self-concept crystallization of the individual.

Following Ginzberg's (24) and Super's (28) emphasis upon vocational choice as a process that proceeds through several stages, Tiedeman (30) attempted to clarify and specify the decisions an individual makes in the course of career development. He asserted that the process can be divided into two periods: anticipation and implementation or adjustment. The first period of anticipation consists of four stages: exploration, crystallization, choice, and clarification. The second period of implementation, which follows the clarification stage, encompasses three additional stages: induction, reformation, and integration. Tiedeman maintained that vocational development is self-development viewed in relation with choice, entry, and progress in educational and vocational pursuits. The succession of the seven stages represents a progressive realization of the individual's goals. Tiedeman's psychosocial approach emphasized the person's social environment and the influence that it exerts upon his/her vocational development.

Behavioral Theories

The behavioral approach to career choice deals almost exclusively with the process of learning as it impinges upon career decision making (19). Krumboltz (31) defined this approach as social learning theory. He asserted that an educational or occupational preference is an evaluative self-observation generalization based on those learning experiences pertinent to any career task. At each career decision point, Krumboltz stated, the decider has one or more response or decision options. Internal (personal) and external (environmental) influencers (constraints or facilitators) shape the nature and number of those options and the way in which individuals respond to them. Krumboltz posited that career

selection is a mutual process influenced not only by decisions made by each individual involved, but also by social forces that affect occupational availability and requirements. People select, and are selected by, occupations.

Early evidence by Krumboltz and Schroeder (32) indicated that reinforcement plus modeling was more effective than reinforcement alone in facilitating information seeking during initial career exploration. The paradigm predicted that an individual will be more likely to express a preference for a particular choice if he or she has been positively reinforced for behaviors associated with that choice or has observed a valued model being positively reinforced for engaging in behaviors associated with that choice. Negative influences such as punishment, the absence of positive reinforcement, or an absence of observed models would decrease the likelihood that a particular choice would be expressed.

Structural Theories

According to Weinrach's (17) classification of career choice theories, structural approaches (as opposed to process approaches) study the link between the individual and the environment, permitting the career counselor and client to explore systematically the client's characteristics and the characteristics of the marketplace. Osipow (16) categorized these approaches of vocational choice as personality theories.

Weinrach (17) classified Holland's (33, 34) theory as a structural approach because it organizes both people into personality types and the world of work into environments. Holland theorized that people's vocational choices are expressions of their personalities. He proposed that occupations can be categorized into six groups--realistic, investigative,

artistic, social, enterprising, or conventional--with each group representing a different personality type.

Holland's (33, 34) theory assumed that at the time of vocational choice, the person is the product of the interaction of his or her particular heredity with a variety of cultural and personal forces including peers, parents and other significant adults, his or her social class, American culture, and the physical environment. Out of this experience, the person develops a hierarchy of habitual or preferred methods for dealing with environmental tasks. People prefer and search for environments that will allow them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles. Holland asserted that the person making a vocational choice "searches" for situations that satisfy his or her hierarchy of adjustive orientations. Research supporting this theory, conducted by Holland along with colleague Nichols (35), indicated that college students tend to seek academic majors that demand or support their distinctive talents.

Holland's (33, 34) conception of career development grew from his experiences with people involved in making career decisions. He observed that most people view the vocational world in terms of occupational stereotypes. Holland hypothesized that where the individual possesses little knowledge about a particular vocation, the resulting stereotype is revealed. Consequently, Holland organized a list of occupational titles according to the psychological similarities of its workers (the Holland Occupational Classification System) for persons to project a preferred life style, and two instruments to assess personality types: the Vocational Preference Inventory (VPI) and the Self-Directed Search (SDS).

Holland (33, 34) also introduced a concept known as self-knowledge, which refers to the amount and accuracy of information an individual has about him or herself. He stated that the adequacy of occupational choice is a function of the adequacy of self-knowledge and occupational knowledge. The greater the amount and accuracy of the information the individual has about each, the more adequate is the choice.

Weinrach (17) classified Roe's (1) theory of career choice as structural in that it posits a link between an individual's personality and the world of work. Roe proposed that every individual inherits a tendency to expend his or her energies in some particular way. This innate predisposition combined with various childhood experiences, she asserted, molds the general style an individual develops to satisfy needs throughout life. The specific needs that Roe related to vocational choice are those defined by Maslow (36) in his theory of personality. Maslow assumed that the needs of humans can be arranged in a hierarchy with the need for the satisfaction of lower-order needs, such as hunger, thirst, and oxygen, being greater than the need for such higher-order satisfactions as love, affection, knowledge, and self-actualization. A prerequisite to the expression of a need is the satisfaction of the needs that are more basic in the hierarchy.

Roe (1) asserted that genetic factors and need hierarchies combine to influence the selection of a career, as a part of their effect on the total life pattern. The degree of motivation toward the attainment of a vocational goal is a product of the arrangement and intensity of the individual's particular need structure. The degree to which an individual is motivated along a particular vocational line may be inferred from his/her accomplishments.

Women and Careers

Career Development of Women

As early as 1954, Caplow (37) suggested certain uniquenesses to women's occupations and the way women perceive an occupation. Caplow pointed out that women's careers usually lacked continuity; that in any "woman's occupation" many of the qualified workers were out of the labor market during certain time periods; that women are confronted by special statutes, rules, and regulations (e.g., discriminatory laws, guidelines for hiring); and that married women who did work usually served as secondary rather than main breadwinners.

Super (28) suggested that whereas four career patterns were sufficient to categorize men's careers, seven career patterns were necessary to categorize women's careers. This classification includes: stable homemaking, conventional, stable working, double-track, interrupted, unstable, and multiple-trial.

Matthews and Tiedeman (38) specified four conflicts a female might experience in her development that were not generally characteristic of the male population. First, the female's conception of male attitudes toward her achievements and intelligence might cause the marriage-minded female to forego a desirable career or to "exchange" it for the security of marriage. The second disparity concerns sex-typing of family roles that stipulate that women are qualified primarily as homemakers, while men should hold the dominant position of breadwinner in the family. A third closely-linked attitude involves the conflict between roles of mother and wife with that of being career-minded. Fourth, women's attitudes toward desired age of marriage tend to conflict with the purpose and desire of college education.

Matthews and Tiedeman (38) theorized that the female is socialized in such a manner that she develops conflicting attitudes of success--the success of the traditional wife-mother role versus the occupational-educational role. The resolution of this conflict and attitude is viewed as a focal point for the analysis of the career decisions of women.

Psathas (39) did not specifically provide a theory of women's occupational choices, but did suggest certain contingencies that affect the occupational choice process for women. These contingencies include a woman's marital plans (both desired age and desired social status of marital partner), spouses' attitude, fertility aspirations (at what age and how many children desired), family finances, presence of brothers to whom deference may be shown in providing financial support for college education, parental socioeconomic status (to include both mother and father's education and occupation), and the general desire of a woman for a career. Psathas asserted that these factors are not considered in theories of career development for men and, thus, separate concepts to explain the process for women are essential.

Zytowski (40) organized a "theory of career development for women." Similar to Super (28) and Psathas (39), Zytowski recognized that the development process for women may be different from that for men because of the intrusion of the homemaker role. Zytowski postulated that a woman's pattern of vocational participation is determined by a combination of internal motivational factors (such as values, interests, intelligence, and abilities) and external, situational and environmental factors (such as socioeconomic level or the opportunity to obtain the necessary training for vocational entry).

While the "modal life role" was seen as homemaker, Zytowski (40) also posited that the woman's role is changing and ultimately may be little different from the role of man. The developmental stages, however, are depicted as greater in number owing to such issues as childbearing and children in school.

Zytowski (40) expanded on the idea of vocational participation by delineating three components to such participation: age of entry into the labor force; span of participation, as being entry with no interruptions (e.g., the "career woman") or a pattern of entering, dropping out, and reentering; and degree of participation, as characterized by working in a predominantly woman's occupation versus a more male-dominated occupation. The mild vocational pattern is characterized by very early or late entry, a relatively brief span, and a low degree of participation. The moderate vocational pattern is characterized by early entry, lengthy span, and a low degree of participation, or by multiple entries and a high degree of participation. The unusual vocational pattern is characterized by early entry, a lengthy or uninterrupted span, and a high degree of participation.

Falk and Cosby (41), in their review of the general theories of vocational choice, stated that the theories are deficient as models for understanding the career development of women. These theories not only have a strong male bias, they asserted, but also tend to ignore problems that, in many ways, are peculiar to women. Falk and Cosby listed several problems unique to females that generally result in a disparity in the developmental process:

1. The female at the earliest stage of development is socialized primarily by another female, usually her mother, who often holds traditional views of what constitutes appropriate educational and occupational attainment.

2. Society tends to sex-type occupations in a manner such that pressures exist to express femininity to the choice of certain occupations, which are restricted both in range and status as compared to the options open to males.
3. During the adolescent years, the female may experience a serious attitudinal conflict between notions of success defined in terms of educational and occupational attainment on the one hand and marriage and motherhood on the other.
4. Influence for attainment from others including parents, teachers, peers, and husbands often tends to encourage marriage-motherhood roles at the expense of further educational and occupational achievements.

Career Orientation of Women

In an effort to delineate variables influencing a woman's career choice, several researchers (42-46) have identified the career orientation of women and have classified them into one of two groups: (a) women who are concerned primarily with pursuing the traditional homemaking role (labeled homemaking-oriented or full-time homemakers in the literature), and (b) women who are aspiring to careers outside of the home (labeled career-oriented or career salient women).

Hoyt and Kennedy (42) reported one of the earliest attempts to describe differences between career- and homemaking-oriented college women. The women in their sample completed tools to measure their career interests--the Strong Vocational Interest Blank (SVIB) and the Edwards Personal Preference Schedule (EPPS)--and a questionnaire concerning post-college plans. The homemaking-oriented group scored significantly higher than did career-oriented women on the SVIB scales for housewife, dietitian, home economics teacher, elementary teacher, and secretary. In contrast, career-oriented females exceeded the homemaking-oriented group on such scales as psychologist, lawyer, dentist, and physician. The results of the EPPS revealed that the career women scored higher on needs achievement and

intraception, while homemakers had higher needs on heterosexuality and endurance. Thus, the career-oriented woman may be viewed as seeking to prove her worth through vocational accomplishments. The homemaking-oriented women, on the other hand, seemed to be more highly motivated by needs for affection and acceptance, which are more readily available in marriage than in a career.

Subsequent studies by Vetter and Lewis (43) and Wagman (44) found similar differences in the vocational interests of career- and homemaking-oriented women. In general, the findings have led to the impression that career-oriented women tend to be masculine in their vocational interests and have interests in occupations that traditionally have been male dominated, while homemaking-oriented women appear to have more traditionally feminine interests. Rand (45) found that homemaking-oriented women appear to adhere to the traditional feminine role, while career-oriented women redefined their role to include behaviors appropriate to both sexes. Rand concluded that her findings substantiated masculinity-femininity as a dimension differentiating career- and homemaking-oriented women.

Munley (46) administered the Strong Vocational Interest Blank for Women (SVIB-W) and a career orientation questionnaire to undergraduate college women. The sample was divided into two groups, career- and homemaking-oriented, on the basis of high-low career orientation scores from the questionnaire. Low career-oriented students scored significantly higher than did high career-oriented students on the dietitian, home economics teacher, and nurse scales on the SVIB-W. High career-oriented students scored significantly higher on the dentist, psychologist, engineer, lawyer, and other male-dominated careers. Career-oriented

women tended to receive high interest similarity ratings in occupations that have been traditionally dominated by males. In contrast, homemaking-oriented women received high interest ratings in occupations that have been traditionally dominated by women.

As noted by Wolfson (47), recent research on women's career development seems to be moving away from distinguishing between work and nonwork orientation; the current focus is on characteristics that distinguish women who select male-dominated occupations from those who select female-dominated occupations. Osipow (16) observed that current investigations have approached the study of career versus homemaking women by assuming that three types of women exist with respect to vocational development: (a) the homemaker, who exhibits no out-of-home work activity; (b) the traditional career-oriented woman, who works but in a female-dominated field; and (c) the nontraditional career-oriented woman, who works in a male-dominated field (often labeled pioneer or role innovator in the literature).

The phrase "nontraditional career choice" refers to the selection of an occupation for which one's sex is a contradiction because that occupation has been traditionally stereotyped as the proper and exclusive domain of only one sex (48). The U.S. Women's Bureau (49) defined nontraditional occupations for women as those that have less than 30% women workers and include professions in science, law, engineering, and medicine, as well as construction trades, skilled crafts, and technical fields. Other studies have used additional measures to distinguish between traditional and nontraditional careers for women.

In a study of the career development of college women, Crawford (50) classified majors as either male-dominated or female-dominated on the

basis of information contained in Earned Degrees Conferred (51). Those in which 40% or fewer of the graduates were female were classed as male-dominated (e.g., accounting, economics, management, engineering). Conversely, those disciplines in which at least 60% of the graduates were female were considered female-dominated (e.g., home economics, foods and nutrition). Steinberg (52), in her study of the backgrounds of professional women, defined nontraditional or pioneer careers as those in which at least two-thirds of the individuals are males, and traditional careers as those in which at least two-thirds of the individuals employed are women (e.g., teaching, nursing). Rytina and Bianchi (53) defined male-dominated occupations as those in which 20% or less of the work force are females, female-dominated occupations as those in which 60% or more of the workers are females, and the remaining occupations in which 21 to 59% of the workers are females as neutral occupations.

In an attempt to demonstrate that the sexual composition of a field influences a woman's career interests and preferences, Heilman (54) designed a study to determine the effects of projected shifts in the sexual composition of two occupations presently dominated by males. Male and female high school students were led to believe that the proportion of women in one of those occupations would be increased significantly (to a 50-50 ratio) in the future. Results indicated that projections of more balanced sex ratios encouraged greater occupational interest among women; however, a totally balanced sex ratio was shown to reduce the degree of occupational interest expressed by men.

Rytina and Bianchi (53) reported that occupation segregation in employment declined during the 1970s, largely because the proportion of both men and women in sex-neutral occupations increased. In 1970, more

than half of all men worked in occupations that had 10% or fewer women; by 1980, that fraction was down to 37%. Similarly, among women, movement into neutral occupations paralleled a decline in their employment in female-dominated occupations. Rytina and Bianchi also noted one large change for women during the 1970s; women increased their representation among the "executive, administrative, and managerial" major group. Whereas in 1970 only about 18% of managers were women, a rise in the female percentage twice that for the overall labor force occurred during the decade. By 1980, women were still underrepresented in the managerial category with their overall representation in the labor force, but the female share among managers had risen to 31%.

Female-dominated Professions

Although Rytina and Bianchi (53) reported that the proportion of the female labor force in female-dominated occupations declined during the 1970s, they noted that about 75% of women are employed in female-intensive areas. According to data from the Bureau of Labor Statistics (55), women remain concentrated in the traditionally female occupational fields; for example, in 1982, 99% of secretaries, 96% of nurses, and 82% of elementary school teachers were women.

Home economics and dietetics also can be labeled as female-dominated professions. According to data from the National Center for Education Statistics (12), women received 95% of the home economics bachelor's degrees granted in 1980-81. During the same year, 94% of the foods and nutrition graduates were women. The 1980 Census of Population from the U.S. Department of Commerce (13) indicated that 90% of the dietetic labor force were female, and results from the 1981 Census of The American

Dietetic Association (14) indicated that of those ADA members responding to the questionnaire (92%), about 97% were women.

Because a dietetics or foods and nutrition curricula generally is housed organizationally in a home economics academic unit, characteristics of a home economics student, along with those of a dietetic student, are outlined below. In addition, discussions will compare the dietetic student with the home economics student.

Home Economics. Several studies (56-60) have attempted to develop profiles describing the "typical" or "average" home economics student. Early work by Murphy and Bosard (56) revealed that the majority of freshmen in home economics were 18-year-old females with parents who had not attended college. They were in the upper half of their class in high school and were active in high school clubs and organizations, such as 4-H and Future Homemakers of America (FHA). They had one year of home economics in high school and listed the home economics teacher as a source of influence on selecting their college major.

Whitehead et al. (57) also found that home economics students were influenced to select their major by positive experiences obtained in high school home economics courses. In their study of undergraduate women, they found that more art and home economics majors took home economics courses in high school than did sociology and language majors.

Stout et al. (58) studied the influential factors on choice of home economics as a major for black and white women attending land-grant colleges and universities. They found that black students had completed more home economics courses in high school and participated more in 4-H and FHA organizations. Both groups of women were influenced by family members,

home economics deans and teachers, and college friends. Mothers were found to be the most influential.

In a study of adult women choosing home economics as a major, Osborn and Avery (59) assessed the work values of home economics students averaging 37 years of age. The highest scores, which represented the motivation to work, in the order selected by the respondents included:

- Way of Life, a compatible life style,
- Achievement, a feeling of accomplishment,
- Supervisory Relations, a supervisor who is fair,
- Intellectual Stimulation, using one's intellectual abilities,
- Altruism, the desire to contribute to the welfare of others, and
- Independence, working in one's own way.

Moderately low scores, expressing less interest, were reported for the following:

- Security, the certainty of retaining a job,
- Associates, satisfactory contacts with others,
- Management, arranging the work of others, and
- Aesthetics, the desire to make beautiful things.

East (60) drew on findings from several studies to develop a profile of students in home economics. She concluded that they were females, primarily from lower-middle-class families, whose parents had not attended college. As college students they achieved only average grades and were motivated primarily by concerns for helping people and the desire to prepare for careers.

Steinberg (52) investigated the backgrounds of women home economists, nurses, homemakers, physicians, and lawyers. In comparing the women in traditional female areas (home economics, nursing, and homemaking) and

those in nontraditional areas (medicine and law), Steinberg suggested certain descriptions representing portraits of typical women in each of the five groups. Her results indicated that the typical home economist is Caucasian and Protestant. Her mother was a homemaker with a high school degree, and her father was a farmer or other nonprofessional who had less education than the fathers of the other groups of women, often less than a high school education.

In addition to considering a family member as a positive role model, the "typical" home economist in the Steinberg study (52) recalled much encouragement from her parents or other relatives for her career development. As a child, she enjoyed domestic activities more than the other girls her age. For the most part, she wanted to be a home economist all of her life. This typical home economist, more than the other women in the study, suggested that previous interests and classes, particularly 4-H activities, as well as encouragement from educators, positively influenced her career development. She considered previous job experiences, as well as volunteer experiences, to have been positive influences on her career development, even though she did recall some negative job experience.

Considering home economics students as a single, homogeneous group is inaccurate, according to the research team of Aadland et al. (11). They stated that the failure to discriminate among career interests and occupational requirements may conceal important differences in the nature of the appeal that the various majors hold for students and in the types of students who select them.

In studying the distinctive characteristics of students in the seven most commonly offered majors in home economics (foods and nutrition, fashion design, textiles, interior design, family and child development,

home economics education, and general home economics), Aadland et al. (11) found significant similarities and dissimilarities. Home economics education and general home economics attracted students from more rural backgrounds and those whose fathers had less education. As high school students, they attended smaller high schools and participated more in FHA. Significant others, such as the county 4-H agent and the high school home economics teacher, were perceived as influential in the choice of this major, while college friends exerted little influence. Reasons for choosing this major evolved directly out of the high school years, from such experiences as related courses and successful home economics experiences, whereas related college courses were seldom important. One strong motivation for the choice of home economics education as a major was to help others. Few students in this area indicated salary as a reason for their choice. The primary reason given for the choice of general home economics was the availability of some form of financial assistance. The students were less motivated to enter this major to satisfy a humanitarian desire to assist others.

The foods and nutrition curricula was found to attract some of the better academic students enrolled in home economics. Foods and nutrition students, Aadland et al. (11) reported, were least likely to have been involved in high school FHA clubs and to consider their high school teachers or principals influential in their choice of this major. Conversely, they were recruited to this major more often by a college teacher or adviser. This finding was consistent with their greater likelihood for having changed to this major sometime after enrolling in college. Other differences associated with the college years included their lower levels of involvement in college organizations and their strong orientation

toward graduate education. Choice of foods and nutrition as a major was least oriented toward improving one's college grades and most oriented toward attaining a good paying job combined with being able to assist others. These students rarely made their choice of this major because of prior successes in home economics, although they were motivated by a related college course.

. Dietetics. The findings of Aadland et al. (11) are consistent with those reported by Cleveland (61, 62), who investigated the personality patterns of dietetic interns and practitioners. In this 1961 study, dietitians indicated that their career choice was a decision made relatively late, frequently not until the second year of college. The interns often said that they were attracted to the field because the professional role of the dietitian was in flux and advancement of the profession represented a stimulating challenge. The intellectual stimulation and challenge of dietetics also were cited frequently. Status and prestige in a professional role and the challenge to achieve in establishing this role at a truly professional level also characterized the dietitians' reported motivations.

In contrast to nursing students and practitioners, also studied in Cleveland's (61, 62) investigation, the dietetic group appeared to be much more status-conscious and achievement-oriented. Nurses found the scientific aspects of nursing and medicine only slightly appealing, while dietitians were intrigued by the scientific aspects of dietetics. Identification with the medical team ranked high with those dietitians employed in a medical setting. Those selecting dietetics as a career reported being more impressed by the opportunity for intellectual gratification in

a field of science. Both the nursing and dietetic groups mentioned "contact with people" as a primary consideration in their occupational decision making. Nurses stated that nursing represents an opportunity to serve the suffering and mankind. Self-sacrifice in the service of others was stressed. On the other hand, the dietetic groups viewed personal contact as an opportunity to influence others in respect to proper diet. Restoration of health through wisdom of science (nutrition) and a kind of "mother-knows-best" attitude characterized the dietitians' position. In addition, the dietitians found fulfillment of prestige and status needs through opportunities for influencing and supervising foodservice employees.

Nippo (9) found similar results in her more recent study of dietetic students. She reported that interest in nutrition and desire to work with people were the two most significant factors influencing the choice of dietetics as a college major.

Stone et al. (8), in agreement with Cleveland's observations (61, 62), found a sizeable number of young dietitians (i.e., those less than 30 years of age) chose dietetics as a major after they entered college. The most significant personal influence on their career choice was the individual's abilities and interests. Although relatives generally were not a frequently reported source of influence, mothers did provide some degree of influence on career choice for more than half of the respondents. High school teachers and counselors were not an influence on the respondents' career choice, a finding consistent with the Aadland et al. (11) study. Dietetic professionals, literature, and job experience were found to have provided some degree of influence on career selection.

Stone et al. (8) also examined value factors affecting the decision to choose dietetics as a career. The factor "interesting work" was quite important for 80% of the respondents and had the highest item mean score among the remaining five value factors. "Social prestige" was rated as "not important" by more than half of the dietitians in the study.

Similar factors influenced the career choice of dietitians responding to the Restaurants & Institutions' 1984 JOB\$ Survey (63). The majority of respondents entered the field because of an interest in nutrition, good food, and a desire to serve people.

Career Decision Making and the Factors Influencing Career Development

Parental Identification

As the basic social and psychological unit in the transmission of the culture and the development of personality, the family conditions almost all the responses the individual makes early in life and continues to exert control over his or her behavior into adolescence and sometimes adulthood (18). This impact, Crites asserted, influences the individual in the selection of an occupation.

Ginzberg et al. (24) suggested that parents affect their children's career aspirations, expectations, and maturity directly by means of instructions and indirectly, by means of parent identification with them. Both Ginzberg and Super (28) offered theoretical concepts of vocational choice that embraced identification with parents as a primary determinant of choice, when attitude, maturity, aspirations, and expectations are considered.

Identification is an important psychoanalytic concept and is consequently important to analytically-based vocational choice theory.

Several studies have examined the relationship between career interest patterns and the degree of parental identification or the predominance of perceived parental influence of one parent over the other.

Roe (1) postulated three basic attitudinal patterns by which parents satisfy or frustrate the early needs of the child: acceptance, concentration, and avoidance. Accepting parents are those who regard the child as a full-fledged family member, having the capacity to assume responsibility; either casually or affectionately, they encourage the child to fulfill his or her potentialities as best he or she can. Concentrating parents devote a disproportionate amount of time and energy to the direction and control of the child, either by encouraging dependence and restricting exploration or by making demands upon the child to perform beyond his or her capacities. Avoiding parents, in an either neglecting or rejecting manner, manifest no positive interest in the child or his or her activities. These parents either spend little time with the child or openly abuse or berate him/her.

Roe (1) asserted that an individual reared in a family in which the dominant parent (the one having the greater weight in decision making) is perceived as either primarily accepting or primarily concentrating develops a sphere of interests centered around person-oriented occupations. In contrast, one who perceives the dominant parent as primarily avoiding develops interests centered around nonperson-oriented occupations.

Paulsen (64) held that the family is the most important agency of socialization in the development of career commitment. She asserted that the family plays an important role both in the decision to have a lifetime career and in the specific occupation chosen.

As a result of parent-child socialization, Luckey (65) asserted that adolescents make their career choice in accord with aspirations held for them by their parents. Standley and Soule (66) found that some parents of daughters in nontraditional careers were not supportive. For example, half of the women in the sample believed their parents would not be disappointed if they dropped out of professional school. In contrast, Trigg and Perlman (67) found that students studying for nontraditional health careers thought their parents favored their career choice; whereas the traditional health student perceived their parents as being less favorable. Kutner and Brogan (68), however, reported results similar to Standley and Soule. Women medical students in their sample were more likely than the men students to say their mothers had tried to discourage them from entering medicine.

In a nationwide study of high school senior women by McLure and Piel (69), the highest rated factor that facilitated the consideration of science and technology careers was encouragement from family to fulfill individual potential. Haber (70) reported that college seniors who were designated as innovative (i.e., choosing an occupation with less than 30% females--such as chemist, marine geologist) saw their parents as highly supportive of their chosen careers.

On the basis of an extensive review of research into the backgrounds of women in nontraditional careers, Auster and Auster (48) hypothesized that the women's choices were actually congruent with their immediate family environment. Among the characteristics in their backgrounds were a working mother, a father as an achievement role model, and both parents supportive of daughter's atypical orientation. Wilson et al. (71) found

that parents of nontraditional women were better educated than were the parents of women in traditional areas.

Lunnenborg (72) studied female college graduates employed in non-traditional areas such as engineering and architecture. Her results suggested that nontraditional careers were fostered more by identification with and the emotional support of both parents, rather than mother or father.

Houser and Garvey (73) examined the amount of support, encouragement, and discouragement women received when they considered enrolling in a male-dominated curricula. The nontraditionals consistently indicated that their families were more supportive of their decision to enroll in a male-dominated program than the traditionals expected their families would be.

Father's Influence. Early research has provided evidence to suggest that a father's education and the social status of his occupation were related significantly to his offspring's educational attainment, which was, in turn, associated with the latter's attained job level (74). Evidence of the importance of the father's influence on vocational choice was furnished by Marr (75), in which subjects at the age of 25 who indicated a commitment to a field were contrasted with those who had not. A higher proportion of those having made a choice had a father or father substitute whom they accepted than was true for those who had not yet chosen a field.

Results by Crites (76) indicated that the degree of identification with fathers is correlated with the interest pattern on the Strong Vocational Interest Blank (SVIB), but not so for identification with mothers. Sons identifying with their fathers scored high in business detail, sons with slight father identification had high interest scores

in the literary area, while sons moderately identifying with their fathers scored high in groups including physical and social sciences.

Steimel and Suziedelis (77) found that predominance of perceived influence by one parent over that of the other had demonstrable effect on the direction of interest development. They found that father-influenced boys scored higher on masculine occupations (as measured by the SVIB) and mother-influenced boys scored higher on more feminine careers. In addition, the father-influenced subjects were more likely to select college majors in the exact sciences, while the mother-influenced subjects leaned toward the liberal arts. More of the father-influenced subjects were engaged in occupations at the professional level and had more education than did fathers in the mother-influenced group. Furthermore, the fathers of father-influenced subjects averaged almost two years more formal education than the mothers of those subjects, whereas the parents of mother-influenced subjects were about equal in their level of educational attainment.

Nagely (78), in comparing women employed in traditional and pioneer fields, found that latter group to have fathers with significantly more education. Helson (79) reported that the highly creative mathematicians tended to have better educated fathers.

Oliver (80) compared the parental antecedents of career versus home-making orientation in college women. She found that fathers appear to be more important than mothers in determining the degree of career commitment for their daughters.

Fathers were the most influential person in the women's decision to attend college, according to a study by Dickerson and Hinkle (81) of entering college freshmen. More women were going to study in fields

closely related to their father's choice for them in contrast to their mother's choice.

Weishaar et al. (82) found that fathers were named most frequently as the primary influencer by females choosing nontraditional majors and least frequently named by those choosing traditional majors. The percentage of males citing their fathers as the primary influencer was twice that of females. Lunneborg (72) found that fathers reinforced nontraditional behaviors twice as often as did mothers. In a study of women in nontraditional and traditional careers, Steinberg (52) found that nontraditional women (doctors and lawyers) most frequently had fathers who were professionals and, in particular, fathers who were in the same occupation.

Mother's Influence. A number of studies (83-85) have examined the influence of mother's occupational choice and role satisfaction on the work orientation (traditional vs. nontraditional) of their daughters. As early as 1966, Ginzberg et al. (86) reported that three-fourths of the mothers of 311 high-achieving women, mostly in medicine and other male-dominated professions, worked at some time. Furthermore, two-thirds of these women whose mothers worked after marriage reported that their mother's employment had a positive effect on their own aspirations.

In general, the findings indicate that working mothers--women who serve as role models successfully combining family and career and expressing satisfaction with their lifestyle--have daughters who are similarly oriented (87). These girls apparently learned a favorable definition of the working mother's role.

Shein (88) suggested that if a woman's self-image incorporates the feminine role aspects, she may be less likely to acquire those job

characteristics or engage in those behaviors associated with the masculine managerial position. Unless viable role models are available to her who represent the integration of "the best of both worlds," a woman may perceive such characteristics and behaviors as inconsistent with her self-image.

Mother's Employment. A consistent finding in the literature on females' career choice is that daughters of employed women have higher academic and career aspirations and actual achievement than do daughters of nonemployed mothers (72, 83-85, 89-93). Theoretically, these results are explained in terms that maternal employment leads to a family pattern with less sex-role stereotyping and division of labor within the family, higher evaluation of females' competence, and increased opportunity for female children to be allowed greater independence and autonomy (90, 92). The employed mother who successfully combines a career and family responsibilities provides a role model for her daughter that includes wider options.

Baruch (87) found that daughters of working mothers preferred the mother, rather than the father, for pattern preference significantly more often than did daughters of nonworking mothers. Findings support the arguments that identification motivation of daughters is related to role status and role satisfaction of their mothers, and that role status is greater in women who work, especially those who work willingly. Douvan (89) reported that daughters of employed women often chose their own mothers as models. Yet, in a study by Dambrot and Vassel (94), women of homemaker mothers tended to select people other than their own mothers as role models.

Vogel (95) found that both men and women who were children of employed mothers perceived significantly less difference between masculine and feminine roles than did children whose mothers did not work. She concluded that sex role perceptions are affected by the actual parental role behaviors to which children are exposed. Smith (96) showed that whether the mother worked was a major influence on a subject's orientation toward the role of housewife versus paid employee.

In the Weishaar et al. (82) study of vocational choices for college students, mothers were named least frequently as influencers by females choosing nontraditional fields (14%) and, with the exception of the general category "others," they were named most frequently by females in traditional fields (30%). Of the females influenced by the mothers, 76% indicated that their mother was presently working outside of the home, more often full time. Conversely, while very few males were influenced by mothers, 75% of those who cited mother as an influencer indicated she was a homemaker. For men in female-dominated careers, Lemkau (97) found that they frequently reported having had employed mothers and having been influenced positively in their career choices by women.

Mother's Role Innovativeness. Other studies have found that a mother's employment outside the home does not explain the daughter's entry into a male-dominated or innovative occupation. The critical factor seemed to be the innovativeness of the mother's occupation (48, 85, 98).

In a study of the determinants of "role innovation" among 200 women planning careers in law, medicine, physics, and other "masculine" professions, Tangri (85) found that the mother's employment in a "role innovative" job bore a strong relationship to similar aspirations by the

daughter. Tangri suggested a four-part typology in which role modeling and type of maternal model were related to occupational choice. In this typology, daughters of less-educated, nonworking mothers were likely to enter traditional occupations, while daughters of more educated working mothers were likely to develop more masculine interests.

Results from a study by Burlin (98) suggested that a working mother is not enough in itself to allow the daughter to aspire to a moderate or to an innovative occupation, as compared to a traditional occupation. What appeared to be crucial to a daughter's aspiring to an occupation in which 50% or fewer of the workers are women is if her mother is employed currently in this occupational category. These findings, Burlin asserted, lend support to the importance for girls of mother as role model in the development of their career goals. Treiman and Terrell (99) found that the prestige of mother's occupation had a positive relationship to daughter's choice of a nontraditional career.

Mother's Education. Research by Astin (100) indicated that having a college-educated working mother was related to a daughter's choice of a nontraditional occupation. Additionally, Rosen and Aneschenisel's (101) study of 3200 high school students showed that mother's educational level had a stronger relationship to daughter's educational expectations than did father's education level.

In Crawford's (50) study of college women, the educational level of the mother in relation to the father was significantly higher for the pioneer group (i.e., those women majoring in male-dominated fields) than for those women majoring in traditional female fields (e.g., general home economics, foods and nutrition). Of the mothers of the pioneer females, 65% had attained educational levels greater than or equivalent to the

father, as compared with only 44% of the traditional mothers. Likewise, mothers of the pioneer group were found to be employed outside the home to a significantly greater degree than were mothers of the traditional group. Of the pioneer mothers, 53% were employed outside the home in comparison with only 33% of the mothers of the traditional group. Anderson (102) found that high school seniors used primarily the educational achievements of their same-sex parent in setting their own educational goals, a factor that served to lower the educational goals of the females in the sample.

Reference Groups

Peer Influence. Hadley and Levy (103) reported that during adolescence the groups influencing an individual's attitudes and behaviors--i.e., his/her peer or reference group--become increasingly more numerous and diverse. Such groups, they stated, occupy increasing proportions of the individual's time and assume increasing importance as reference groups, both as comparison points and sources of values. The attitudes and aspects of self-concept induced by these reference groups, they held, usually add their contributions to the course of vocational development.

McDill and Coleman (104) maintained that by the senior year of high school, a student's status in his or her peer group is an equal or more important factor than family socioeconomic level in occupational-aspiration formation. They suggested that desire for future success rested as much on achievement and peer status in a group as on role models or parental desires.

According to Hollander (105), the major influences of peers and peer groups on vocational development are during the ninth and tenth grades. According to Hoppock (106), both adolescents and adults are influenced

greatly by members of their immediate peer cultures. He stated that the occupational knowledge and contacts of the peer group aid in vocational exploration and decision making by providing trial jobs to members of the peer group.

Paulsen (64) contended, however, that the peer group's direct influence on occupations is negligible. She stated that peer group does not influence a person's career decisions directly, but that the peer group does influence other factors, such as attitudes, values, and school motivation, which in turn influence career decisions. Peer group involvement, she asserted, is a concomitant to career commitment, since commitment is not an isolated phenomenon, but is a way of life and those committed to a career also are committed to peer group activities.

O'Donnell and Anderson (93) did not find peer influence to play a significant role in the determination of a college major for her sample of female undergraduate students. Most of the women in both subgroups of pioneers and traditionals stated that their friends were supportive of their choice of major and career aspirations, though pioneers tended to have been more influenced by noncollege friends, including professionals in their given field, than were traditionals. Neither traditionals nor pioneers had experienced significant social pressures from peers in their living group not to major in a given field.

Auster and Auster (48), however, asserted that peer influence is second only to parental influence, especially during periods of rapid social change, and reported that adolescents' dependence on their peers for validation of personal worth can play an important role in their future plans, including the choice of an occupation. They held that a supportive peer group was an important influence in the decision of young

women to enter a nontraditional career. In her study of female college graduates employed in nontraditional areas, Lunneborg (72) found that during graduate school the peer group was the strongest rated influence on the sample to pursue nontraditional careers.

Male vs. Female Peer Influence. In an investigation of role model influences on college women's career aspirations, Almquist and Angrist (83) found that career-oriented women were more likely to have been associated with masculine reference groups. Many of the persons named by the career salient students as important influences in choosing an occupation were males, and they were encountered within an explicit work context. In the study, students were asked to indicate occupations being chosen by their male and female friends, to determine if any similarity existed between occupations chosen by the respondents and their peers. Noncareer-oriented women chose occupations similar to those reportedly chosen by female friends. Career salient women more often chose an occupation similar to those chosen by both their male and female friends. Nearly two-thirds of the career salient women chose male-dominated occupations for themselves. In conclusion, Almquist and Angrist asserted that career salience is related to choosing fields chosen by male peers.

Similar conclusions were made by Trigg and Perlman (67) and Stake and Levitz (107). In studying the social influences on women's pursuit of a nontraditional career, Trigg and Perlman (67) reported that those entering a nontraditional, as compared to those entering a traditional field, were more likely to have a boyfriend who was supportive and tolerant of a non-traditional career. Stake and Levitz (107) found that career women reported significantly more encouragement than did traditional women from significant males. Weishaar et al. (82) found that males were more likely

to have influenced those female students choosing nontraditional majors, while females were more likely to have influenced female students' choices in the majors traditional for women.

Houser and Garvey (73) examined the amount of support, encouragement, and discouragement women received from the important people in their lives when they considered enrolling in a male-dominated program. The nontraditionals in the sample indicated that friends and school acquaintances were more supportive and encouraging of their decision to pursue a male-dominated career than the traditionals (including home economics majors) expected the "important others" in their lives would be. In comparing the nontraditionals with the "considereds" (those women who had considered a nontraditional program, but did not pursue it), the only significant difference in the amount of support or encouragement they received or expected came from the males in their lives, including friends and school acquaintances.

Faculty and Professional Role Model Influence

Simpson and Simpson (108) found that career-oriented college women were more likely than traditional or homemaking-oriented women to indicate professors and persons in the occupation as the most important source of personal influence on their occupational choice. Similarly, Almquist and Angrist (83) found that career salient students were influenced most strongly by college professors and occupational role models. They suggested that faculty role models may provide psychological incentives to select a particular occupation. These incentives include rewards for academic performance or work activity in which the model aids the neophyte in developing a self-concept as a person capable of operating effectively in a given occupation. Research by Tangri (85) also suggested that

college women in role innovative fields and for whom careers are salient, as compared to traditionals, are more likely to indicate college professors as one of the most important sources of influence on their occupational choice. Data from the study suggested that faculty are effective in enhancing the probability of role diversification among women by encouraging them to undertake studies that permit wider choices later. Tangri asserted that it would be very difficult for a woman to stay in a highly male-dominated field without the encouragement of some faculty members.

In her study of sex stereotypes in occupational choice, Almquist (109) found that female students in male-dominated curricula were influenced by someone they knew who was employed in her chosen occupation or, more often, by one or more college professors. These role models, whether male or female, served to stimulate the students' interest in particular occupational fields. The detailed interview data suggested that these potent influencers did not induce explicit copying on the part of the student; instead, the role models exerted an effect by aiding the student in understanding the nature of particular work roles, helping her to evaluate her own qualifications, performance, and abilities, and encouraging her to attend graduate school.

Douvan (89), in a discussion on the role of models in women's professional development, pointed out that many women from traditional backgrounds were influenced by significant women faculty members during their undergraduate work. On the other hand, O'Donnell and Anderson (93) reported that nontraditional women had exposed themselves to more role models than was true for traditionals in college--a finding consistent with previous studies (83, 85, 108, 109). The women classified in the

male-dominated pioneer group could identify individuals more readily whom they believed exerted some positive influence on their choice of major, and identified male professors and professionals more frequently as influencing their choice of major than did traditionals. These professors and professionals on-the-job were said to strengthen significantly the resolve of the women to enter and compete in male-dominated careers.

Weishaar et al. (82) found that both male and female students were more likely to be influenced by people in fields similar to their own and to be more certain of their choices than were those students influenced by people in unrelated fields. They held that similarity of field is much more important than other model characteristics, such as similarity of sex, with regard to vocational decision making.

Surveys to determine the most influential people in the career choices made by medical laboratory science students revealed that students were influenced more by professionals in the field than by any other means (110, 111). Similarly, in a study of the recruitment effectiveness in occupational therapy, Townsend and Mitchell (6) found personal contact to be the most influential.

Along the same line, in a study of the decision to enter medicine, Kutner and Brogan (68) reported that women, but not men, mentioned support from medical school faculty and support or encouragement from female physician acquaintances as influencers on their decision to become a physician. Similar results were cited by Greenfield et al. (112) who found that women more frequently than men cited direct recruitment efforts as an influential factor in their choice of a career.

Work Experience

Almquist and Angrist (83) revealed that career-oriented women in their college student sample had a larger number of jobs and a wider variety of previous work experiences than did their noncareer-oriented classmates. Their findings suggested that the work experience of the career-oriented women was more role-broadening than that of traditional (noncareer-oriented women). Role-broadening was defined operationally as having exposure to professional male and female role models. Almquist and Angrist stated that through work experience, the neophyte has a chance to place herself in a particular role, with its attendant demands on performance, time, attention, and effort, and can decide whether she likes the role. Such experiences, they asserted, allow the student to test her self-conception against the work role requirements and to gain a clearer picture of her own ability through the expressed approval or disapproval of supervisory personnel. For students in the sample who were employed in their own university departments, or in an occupational milieu related to their own vocational choice, the job may have provided contact with occupational role models who influenced their later career choices. Women in both subgroups who reported themselves oriented toward conventional career aspirations in the home tended to have a more limited range of work experience.

A subsequent study by Almquist (109) indicated that women who selected male-dominated careers had a greater amount of work experience in a broader variety of jobs than was true for those who did not. The interviews showed that while work experience was important for both groups (male- vs. female-dominated), because it aided in the reality testing (27) of their vocational plans, it was especially important for the pioneer

choosers who had greater opportunity to refine and enlarge their self-concepts, to come into contact with occupational role models, and to work in jobs related to the particular occupation they came to prefer.

O'Donnell and Anderson (93) found that women in both traditional and nontraditional fields in their sample had considerable work experience in a variety of jobs. A high percentage of women in both groups had some work experience related to their major, but the nontraditionals or pioneers had more experience related to their future career plans, a finding consistent with previous studies (83, 109). This experience was perceived by the women as helping them to formulate a specific career goal.

Behuniak and Gable (113) examined sex differences in college students' satisfaction with college and attitudes about future employment. They found that females believed previous work experience was more important in determining their career choice than was true for males.

Vocational Guidance Counselors

The potential influence of the counselor as a molder of attitudes was shown in a study conducted by Krumboltz and Varenhorst (114). Ninth-grade students were asked to indicate the extent of their agreement with three statements, each of which was attributed to a different one of three communicator groups: parents, peers, counselors. Although the study was not designed to test influences specific to vocational behavior, the results indicated the potential power of the counselor to shape attitudes.

This reported power has created a controversy concerning whether or not career counselors display vocational stereotypes and, thus, channel women into sex-role traditional careers and keep them from considering more career options. Ahrons (115) administered a questionnaire to school

counselors and found that the counselors generally held the traditional view of female work roles involving home-career conflict.

Hurwitz and White (116) studied the effects of sex-linked vocational information on reported occupational choices of high school juniors. Their results indicated that choices made by the students on the basis of sex stereotypes, or lack of knowledge of the probability of success (entrance) into a given occupation, can be affected by providing vocational information about new opportunities for women.

Donahue and Costar (117) conducted a study to document counselor bias toward females. Their results led to the conclusion that counselors recommend occupations for their female clients that pay less money, require less education, and are supervised more closely than for males.

Allison and Allen (118) argued that women continue to end up in the lowest paid fields, such as nursing and teaching, rather than becoming lawyers and chemists, because of high school counselors who discourage them from taking the type of courses necessary for some of the nontraditional professions. A similar assertion was made by Mercado and Atkinson (119), who posited that some high school guidance counselors may channel the career preferences of high school students in the direction of sex-typed occupations.

After reviewing literature pertinent to sex discrimination in educational and vocational counseling, Harway (120) cited many factors that contribute to inequitable counseling. These factors included the sex role attitudes and biases of counselors, deficiencies in counselor training, and shortcomings of tests and other source materials used in counseling practice. Fitzgerald and Crites (121) concluded that the biased attitudes of counselors toward women's career aspirations had been

documented so thoroughly that reciting the classic studies would be superfluous. Smith (122), after an extensive review of both published and unpublished studies of sex bias in psychotherapy and counseling, found little empirical evidence to support the existence of such bias; however, the data did suggest that sex bias existed in educational and vocational counseling.

Sauter et al. (123) found that college freshmen women who made traditional career choices were significantly more likely than those making nontraditional career choices to report they were influenced by guidance counseling. This finding, Sauter et al. asserted, suggests that the entire counseling experience may propagate sex-typed career selection. They argued that high school women are being offered a very restricted view of the career possibilities open to them as adults, a situation that would lead them to select a career on the basis of sex-role proscription, rather than on the basis of informed choice. A similar finding was reported by Auster and Auster (48) who, after reviewing the literature on the backgrounds of women in nontraditional careers, concluded that the influence of vocational counselors was negligible in the decision to select a male-dominated or nontraditional career.

Talbot (124) found that high school and college counselors were not mentioned as a source of either information or encouragement by women dentists surveyed in her research. Similarly, Stone et al. (8) found that young dietitians did not perceive counselors as influential in their selection of dietetics as a career. High school counselors received the lowest value of perceived influence among other sources, with 78% of the respondents rating the counselors as "not an influence"; 16% rated them as "not applicable," indicating that the dietitians had not discussed

their career plans with their high school counselor. In addition, 60% of the respondents were not influenced by college career guidance counselors and 19% rated college counselors as "not applicable."

Grotevant and Durrett (125) concluded that their large sample of high school seniors, including students from a broad cross section of backgrounds, appeared to be making important career decisions based on limited information. Specifically, the seniors did not seem to have accurate knowledge of the educational requirements of the careers that they had tentatively chosen, nor did they have much information about the relationship between their own vocational interests and their career choice.

In a study by Yanico (126), college women perceived themselves as being less informed about occupations that are nontraditional for them than about traditionally female fields. They also reported having less information about masculine occupations than men perceived themselves as having. College men, on the other hand, perceived themselves as equally knowledgeable about traditionally feminine occupations and rated themselves as knowledgeable as women about so-called women's fields. Weishaar et al. (82) reported that counselors were not a major influence in the career decision-making process of their sample of college students; however, they did find that males were more likely to be influenced by high school counselors than were females.

Post-Kammer and Perrone (127) found that many talented students thought they were unprepared to make career decisions when leaving high school. In addition, one-fourth of the respondents experienced difficulty in relating interests and abilities to various career opportunities. When compared to males, female students in the sample thought they were less prepared in regard to where to obtain their desired training. A recent

finding reported by Noeth et al. (128) showed that both male and female high school graduates did not perceive their high school counselor as helpful in their decisions about a college major and an occupation.

Personal Influence

Almquist and Angrist (83) found that noncareer salient women, when compared to career-oriented women, were more likely to name family members or friends, but very often believed that no one had influenced their career choice. Goodale and Hall (129) held that a young woman's career plans may be more dependent on her own goals and ambitions than on those held by her parents. Similarly, Weishaar et al. (82), in their study of the primary influencers of initial vocational choices for college women, found that 45% of all female students surveyed indicated that no one had influenced their choice of major. Compared to women making nontraditional career choices (e.g., business, engineering), women making traditional or neutral choices (e.g., education, human development) were found to indicate more frequently that no one had influenced their choice of major.

Personality Needs and Work Motives. One important emphasis in both career guidance and personality research is the study of the relationship between the choice of a vocation and the personality needs of the individual (130). Such research has attempted to find whether a significant divergence exists between the personality needs of individuals and the rewards to be gained from their choices of vocation. The approach has, as its foundation, theoretical psychological considerations suggesting that a basic relationship between personality needs and the anticipated satisfactions a job might provide in the fulfillment of the individual.

Hoppock (106, 131) suggested a theory of vocational choice that was based mainly on the use of occupational information built upon personal needs. The rationale stemmed from the assumption that occupational choice improves as people are better able to identify their own needs and the potential need satisfaction offered by a particular occupation. Hoppock held that occupational choice begins when the individual first becomes aware that an occupation helps to meet his/her needs.

Numerous studies examining occupational motives and the relationship between perceived job characteristics and job satisfaction have used the dichotomy of work motives as outlined by Herzberg et al. in The Motivation to Work (132) and Work and the Nature of Man (133). Herzberg hypothesized that job context factors or extrinsic job characteristics prevent dissatisfaction, while job content factors, or intrinsic job characteristics, create satisfying job situations.

Job characteristics classified as "extrinsic" focus on the context or environment in which work is done and on job features determined by external events or other people. Extrinsic characteristics include working conditions, relationships with co-workers, supervision, company policy and administration, salary, and job security. Intrinsic characteristics deal with the content and tasks involved in doing a job and with opportunities provided on the job for self-expression and self-actualization. These characteristics include the kind of work done in terms of responsibility, variety, skill, and autonomy; opportunities for personal growth and development; and feelings of pride and accomplishment (132, 133).

In essence, Herzberg's two-factor theory (132, 133) proposed that the primary determinants of employee satisfaction are factors intrinsic to the work that is done. These factors are called motivators because employees

are motivated to obtain more of them, e.g., through good job performance. Dissatisfaction, on the other hand, is seen as being caused by hygiene factors that are extrinsic to the work. The theory specifies that a job will enhance work motivation only to the degree that motivators are designed into the work. Changes that deal solely with hygiene factors should not generate increases in employee motivation.

Wernimox (134) and Ewen et al. (135) found that intrinsic and extrinsic factors can be sources of either satisfaction or dissatisfaction, but intrinsic factors are stronger in both cases. Gruin et al. (136) found that greater satisfaction was derived from "ego satisfying" work and a more limited and less intensive satisfaction from extrinsic aspects.

Researchers have used the Herzberg theory and dichotomy of work motives (132, 133) to study occupation choice and career development. Empirical work has examined the work motives of males vs. females, traditionals vs. nontraditionals, and high achievers vs. low achievers.

Males vs. Females. A number of studies have indicated that females tend to select jobs more on the basis of intrinsic factors, while males tend to select jobs more on the basis of extrinsic factors. Males have indicated relatively greater interest in the extrinsic factors of salary and benefits (68, 137-143), job security (137, 139, 142, 143), power (138, 140), and esteem or prestige (68, 143, 144). Females, however, have placed greater emphasis on having an interesting job (137, 138, 144), accomplishing something worthwhile (140), having an opportunity to "learn new things" (140), and having an opportunity to help others (112, 138, 142-144).

In an early study, Jurgensen (137) found that men attributed greater importance to job security, benefits, and advancement, while women

considered the type of work, co-workers, supervisors, working hours, and working conditions most important. From these results, Jurgensen concluded that the "typical" woman during the 1940s was interested in working for a relatively short period of time and, compared to men, was more concerned with immediate working conditions and not as seriously interested in making long-range plans.

In the Jurgensen (137) study, marital status had relatively little effect on job preferences, although existing differences were basically in the same direction as sex differences in that single men tended toward the preference direction shown by women. As the number of dependents increased, greater relative importance was attached to security, company, co-workers, supervisor and benefits; and less importance was given to work, pay, hours, and working conditions. Security did not increase with advancing age and advancement did not decrease. For the most part, changes in job preferences accompanying age changes were not linear trends, but occurred suddenly and were accompanied by reversals.

Singer and Stafflre (138) concluded that during the early 1950s definite work-related sex stereotypes existed among adolescents. Male high school seniors preferred jobs that allowed independence, power, and high salaries, whereas female high school seniors desired jobs that were interesting and in which they could help others.

Using college sophomores as the sample, Wagman (144) followed-up the Singer and Stefflre (138) study. Although Wagman (144) did not find widespread sex differences in job values and desires, men and women did differ significantly with respect to two values: men desired esteem and women desired social service opportunities.

Singer (140) investigated sex differences in preferences for various job factors that college students considered important in their job selection decisions. The results showed that while college students have strong differences in their preferences, these differences are not stereotypically male or female. Overall, both male and female college students are looking primarily for jobs in which they can learn, accomplish something worthwhile, and work with friendly and congenial co-workers. A significantly larger proportion of females attributed high importance to "a chance to learn new things," and "an opportunity to accomplish something worthwhile." A significantly larger proportion of males attributed high importance to "a high salary," "important responsibilities," and "good fringe benefits." The five preference factors with the highest overall mean ranks for males were "an opportunity to accomplish something worthwhile," "a chance to learn new things," "a high salary," "steady employment," and "friendly and congenial co-workers." Females gave the highest overall mean rankings to "an opportunity to accomplish something worthwhile," "a chance to learn new things," "friendly and congenial co-workers," "opportunities for advancement," and "recognition of work well done." Neither males nor females ranked social responsibility factors among the most important to them. Having knowledge regarding company policies concerning employment discrimination, the number of minority group members currently employed by the company, the personal philosophies and practices of top management, and the availability of company services was not considered to be relatively important.

McCall and Lawler (145) studied high school students' perceptions of work. They reported that females had lower occupational aspirations and rated intrinsic rewards more important, and extrinsic rewards less

important than was true for males. Gade and Peterson (142) examined the work values of vocational-technical students. Their results showed that men scored significantly higher than women on three of the extrinsic work values studied (economic returns, independence, and security), while the women scored significantly higher on the altruism scale of the intrinsic values cluster.

In a study of the occupational values of male and female nursing students, Auster (143) found that male students reported greater desire for opportunities to "exercise leadership," "earn a good deal of money," be "free of supervision," and achieve "status and prestige." The female students wished to "be helpful" and "work with people." The vast majority of students believed that nursing would fulfill most of their expectations; however, a higher percentage of women than men expressed this belief.

Stake (146), in her study of the motives for occupational goal setting among male and female college students, found that the intrinsic work enjoyment scores of females were significantly higher than the scores of males. Regardless of job goal, females expressed expectations for greater work enjoyment. The females in the study indicated greater expectations for work enjoyment and expressed fewer financial concerns. Since most of the males were anticipating a breadwinner role, Stake hypothesized that their selection of occupational goals was influenced by an awareness of this future role. During the process of vocational selection, the males focused less on possibilities of intrinsic work enjoyment than did females. Stake also suggested that since females expected fewer financial responsibilities, they were less likely to attribute their chosen goals to a need to fulfill a breadwinner role; hence, they may have been more open to attributions based on intrinsic work enjoyment.

Male-female differences in work values and motivations have not been entirely consistent and some researchers have reported no sex differences in motives for work (147-149). Saleh and Lalljee (147) found that their sample of male and female college students did not differ in their selection of important job characteristics. Both selected the intrinsic factors more frequently than the extrinsic factors. A second sample in the Saleh and Lalljee study, which consisted of male and female public school teachers, stressed as many intrinsic factors as extrinsic; however, again, no sex differences in work motives were found. They asserted from the results that what females look for in their work is not different from what males consider important, everything else being equal.

Brief et al. (148) also did not find a significant difference between the work motives and values of males and females. They asserted that the results of their study showed that when occupational differences are controlled, automatic assumption of a pattern of sex differences in work attitudes is dangerous. Job attributes investigated were high pay, security, short hours, advancement, and feelings of accomplishment. Similar conclusions were drawn by Kaufman and Fetters (149), who found no differences among a sample of male and female accountants, either in work motivation or job values. They suggested, however, that women may be similar to blue-collar men, who often attach greater importance to the extrinsic aspects of a job than to intrinsic features, convenience, or relations with co-workers.

Results reported by Voydanoff (150) indicated that both intrinsic and extrinsic job characteristics are among the most important in relation to job satisfaction for both men and women. Self-expression, an intrinsic factor, had the highest correlation with job satisfaction for

both men and women in the sample. Role strain, an extrinsic factor, was second for women, while another extrinsic factor, financial rewards/promotion, was second for men.

In a study of the decision to enter medicine, Kutner and Brogan (68) reported that an opportunity to provide service ("desire to help others," "interest in people") and to have freedom from supervision ("desire for independence in your work") were somewhat or very important reasons for entering medicine for a large majority of both women and men medical students. Men, however, rated "high prestige" and "high salary" as significantly more important than did women.

Greenfield et al. (112) studied the academic and career characteristics of male and female freshmen engineering students. When asked to rank the importance of several variables related to achieving career satisfaction, both males and females listed as first and second, "certainty of employment," and "challenging work." For males, the third and fourth choices were "respect of co-workers," and "opportunity for problem solving." For females, the third and fourth items were "opportunity for problem solving" and "opportunity to help others." "Prestige" did not play an important role for either group.

On a later questionnaire, students were asked to indicate, for the same variable, the way they viewed opportunities in the field of engineering. Males and females ranked highest "challenging work," "certainty of employment," and "opportunity for problem solving." For males, respect of co-workers ranked lower in describing the field than in importance for them, while for females it ranked higher. For females, opportunity to help others and challenging work were tied and ranked first as the opportunities provided in the engineering profession. Students

seemed to view the rewards of a career in engineering as consistent with their own career needs (112).

Traditionals vs. Nontraditionals. Rosenberg (151) studied several thousand Cornell University students enrolled in various majors during the early 1950s. The expression of values by students in different fields varied systematically. These values were classified as: working with people in a helping manner, earning large amounts of money, acquiring social status and prestige, and having the opportunity to be creative and use special talents. Rosenberg found that architecture, journalism, drama, and art students valued self-expression more than did other groups, while students in sales fields, hotel and food studies, real estate, and finance valued self-expression the least. Social work majors, premedical students, and education majors were highest in the desire to help and work with people, while engineering, natural science, and agriculture students were lowest in this value. The real estate, finance, hotel and food, and sales students scored highest on extrinsic reward values, while the social work, teaching, and natural science students scored lowest on this scale.

Simpson and Simpson (108) compared the values and sources of personal influence that affected the occupational choices of career-oriented and noncareer-oriented college women. The career women in the sample were influenced significantly more by the nature of work tasks (intrinsic responsibilities) as outlets for exercising their abilities. They concluded that career-oriented women will stress more often intrinsic features of the work performed as occupational values, and will stress extrinsic occupational rewards not directly related to work values less often.

Richardson (152) found that career-oriented women were highly career motivated and perceived the career role as primary in their adult lives. The work-oriented women were characterized with well-defined occupational aspirations who placed a high value on both the career role and marriage-family responsibilities in their future. Work-oriented women, Richardson found, tended to choose traditionally feminine occupations in contrast to the career-oriented women whose aspirations included higher-level and less traditional occupations. Work-oriented women were found to seek both intrinsic and extrinsic work satisfaction, thereby resembling both career- and noncareer-oriented women. Richardson concluded that work-oriented women are intrinsically interested in the work they plan to do, but do not consider work central to their life plans.

Almquist (109) studied college women in male-dominated areas (lawyers, college professors, psychological researchers) and female-dominated fields (dietitians, social workers, secretaries). Both categories of women were oriented strongly toward an occupation that allowed them to combine career and family and to be free from close supervision. Also, they were interested moderately in a stable secure future, and virtually were unconcerned about high prestige. Women who chose a male-dominated or nontraditional career were adamant about wanting to use their special abilities and rather more concerned about achieving a high income than were those who opted for a female-dominated or traditional career. The latter group was more interested in working with people rather than things, having an opportunity to help others, and suiting parents' ideas of success.

In a study by Moore and Veres (153), "innovators" in male-dominated fields made their career selection chiefly because it fit their special

interests and because it permitted creativity. Traditional women indicated that working with, or being helpful to people was of prime importance in making their occupational choice. Results from a study by Gade and Peterson (142) indicated that women in nontraditional programs were more intrinsically motivated than extrinsically.

Behuniak and Gable (113) reported that education majors (students in female-dominated fields) believed that previous work experience, job openings, job security, important and interesting work, and friendly co-workers were the most important factors in choosing a career. This view was contrasted with business majors (students in male-dominated fields), who indicated that salary, job security, important and interesting work, freedom to make decisions, opportunity for advancement, and friendly co-workers were most important. The education and business majors differed most sharply on the importance of previous work experience, salary, and opportunity for advancement. The humanities/fine arts majors, the physical and biological sciences/math majors, and the social science majors all revealed similar patterns of response.

High Achievers vs. Low Achievers. Perrone (154) administered a value orientation instrument to a sample of junior high school girls. Results indicated that intelligent and high-achieving girls sought careers offering intrinsic satisfaction, whereas lower achieving, less intelligent girls sought educational objectives inconsistent with their abilities and talents.

In their study of sex and job orientation, Saleh and Lalljee (147) found that the higher the job level, the more intrinsically-oriented the employees were regardless of their sex. The findings from a study by Kohn (155) indicated that lower status backgrounds were associated with

high extrinsic reward importance. Similarly, data from McCall and Lawler's (145) investigation showed that blacks and youths from lower status backgrounds placed more importance on extrinsic rewards.

Gruenberg (156) found that extrinsic satisfaction sources were more important as predictors of overall satisfaction among unskilled, semi-skilled, and clerical workers than among skilled and professional workers. He interpreted the data as supporting the view that workers in manual and routine jobs accommodate their desires to their limited job opportunities, rather than supporting the notion that such workers have inherently different needs and values.

Perceived Benefits.

Exchange Theory. Exchange theorists conceive of interactions between people as a type of interchange in which individuals seek to maximize their outcomes by achieving the greatest number of benefits with the least cost possible (157). Homans (158) and Walster et al. (159) suggested an exchange or equity theory that has been used (160) to describe the process of choosing a career. This theoretical approach predicts that the selection of a major field of study is dependent on an individual's perceptions of the costs and rewards connected with that choice. The key concept in exchange theory is profit, defined as rewards minus costs. Costs include punishments incurred and rewards foregone by not performing alternative actions.

Carney and Morgan (160) used the exchange theory as the theoretical framework for their study of college women choosing traditional and non-traditional career fields. They hypothesized that since the rewards of traditional careers for women are not high, both in economic and prestige terms, this reduced profit will lead to new choices. However, Carney and

Morgan asserted that unless a real alternative exists for a woman who chooses a traditional career field so that she is able to forego it, her actions cost nothing and she will continue to pursue it even if the absolute value of the reward is low. Their expectations were that students with the most available options would choose nontraditional career fields. This prediction proved to be true of the college population in the study.

Results of the Carney and Morgan study (160) indicated that women in nontraditional majors, when compared to those in traditional areas, had higher ACT scores, higher grades in math, and a higher ranking in their high school class. Carney and Morgan concluded that strong academic ability in these areas makes the opportunity cost of choosing a traditional female field high; and poor academic preparation, particularly in mathematics skills, makes the cost of entering a traditional field relatively low. On entering college, nontraditional majors had higher degree expectations than did the traditional majors, which, according to Carney and Morgan, indicated that the nontraditionals had more directedness and possibly more personal motivation. They asserted that these women realized the cost of not pursuing a degree is great.

Expectancy Theory. A model of motivation was developed by Vroom (161), who expanded on the work of both Herzberg (132, 133) and Maslow (36). The Vroom (161) model views motivation as a process that governs choices. Thus, if an individual has a particular goal, in order to achieve the goal, some behavior must be performed. The individual, therefore, weighs the likelihood that various behaviors will achieve the desired goal, and if certain behavior is expected to be more successful than others, that type of behavior likely will be selected. This

approach, called expectancy theory, is a cognitive theory of motivation designed to specify the determinants of the choices individuals make in any type of situation. Within the generic framework, versions of the theory have been used to explain how individuals decide to enter both occupations and organizations.

Illustrative of this interpretation of expectancy theory, Lawler's (162) particular adaptation stressed the importance of the two types of expectancies: (a) Effort $\rightarrow$ Performance ($E \rightarrow P$) expectancy, which refers to the perceived probability that a person can perform an intended behavior, and (b) Performance $\rightarrow$ Outcome ($P \rightarrow O$) expectancy, which refers to the probability that certain outcomes (high pay, satisfaction, etc.) will result from the intended behavior. These outcomes are assumed to vary in attractiveness or valence (V), as well as in the probability of being performable or obtainable.

Lawler's (162) model suggested that $P \rightarrow O$ expectancies combine multiplicatively across job-related outcomes with the valence of the outcomes to predict the attractiveness of a behavior. To obtain a predictor of job choice, the model calls for the multiplication of the attractiveness term of the $E \rightarrow P$ expectancy, resulting in the motivation score that can be calculated for each job possibility. The theory predicts that an individual will prefer the job opportunity that yields the highest attractiveness score, but will choose the job that yields the highest motivation score.

Bartol (163) used the expectancy theory as a predictor of female occupational choice and attitude toward business. She used the expectancy model developed by Mitchell and Knudsen (164), who found expectancy theory to be predictive of both evaluations of occupations

(attitudes) and occupational choices for male business and psychology students. Data from the Bartol study supported the validity of expectancy theory and the Mitchell and Knudsen model; however, the results suggested that the model may be a weaker predictor of attitude toward business for females than for males. Yet, they asserted that the expectancy theory may have high potential for use in research relating to female career choices and occupational attitudes.

Wheeler and Mahoney (165) used the expectancy model in the analysis of occupational preference and occupational choice. Their research supported Lawler's (162) expectancy model by showing that occupational choices of upper-class college students were multiplicatively related to how attractive the occupation was, and how likely subjects believed they could succeed in the occupation and have the finances for it.

METHODOLOGY

The Study Sample

Junior and senior students in coordinated undergraduate programs in dietetics (CUPs) and interns in dietetic internships listed in the 1984 Directory of Dietetic Programs (166) were selected as the sample for the study of career selection and related variables. Program directors were contacted to request assistance with the study and determine the sample number; they were needed to assist by distributing, collecting, and returning the questionnaires.

Two versions of a cover letter (Appendix A), one addressed to CUP directors and one to internship directors, were mailed. A reply form (Appendix A) to indicate willingness to assist with the study and provide data on the number of students or interns in the programs and a self-addressed stamped return envelope were enclosed with the letter to the directors. Since the study instrument was adapted from that used by Stone et al. (8, 167), reprints of the two articles on that research and the survey instrument (Appendix A) used in that study were enclosed to provide sufficient background information and to assist in explaining the objectives of the present study.

Upon receipt of the reply form from directors, a letter (Appendix B) was sent expressing appreciation for their agreement to assist with the study and to inform them of the projected date for receiving the questionnaires. About two weeks following the initial mailing, a second letter (Appendix B) was sent to program directors who had not returned the reply

form. Phone calls were made to those not responding to the follow-up mailing.

After the initial mailing and two follow-ups, directors of all of the 64 CUP programs and 102 of the 105 internships, or 98% of the accredited programs, agreed to participate in the study. The final prospective sample, identified by the program directors, consisted of 1,489 CUP students and 888 dietetic interns, or a total of 2,377.

Instrument Development

Preliminary Instrument

The research instrument was adapted primarily from that used by Stone et al. (8, 167) to study career choice and career satisfaction of young dietitians (≤ 30 years old) in the early establishment stages of their careers. Questions were revised somewhat because of the difference in the samples. Stone et al. surveyed young practitioners, while students/interns were the focus in the present study.

Selected survey items also were adapted from questionnaires used in four other studies:

- Townsend and Mitchell (6), who studied the career choice of occupational therapists;
- Fargen et al. (10, 168), who examined the career patterns, interests, and aspirations of dietitians in mid-career;
- Aadland et al. (11), who surveyed home economics students to determine similarities-dissimilarities among the students enrolled in seven different home economics majors; and
- Strange and Rea (169), who studied career choice considerations and sex-role concepts of male and female undergraduate students.

Questions in this study were related to career selection, professional identification and involvement, career and educational aspirations, career motivation, and potential sources of career satisfaction in dietetics.

In an initial pretest of the instrument, 15 graduate students in dietetics and institutional management completed the survey, then an evaluation form (Appendix C) to indicate suggestions for revisions. A second pretest was conducted with 15 students in a coordinated undergraduate program, who also completed both the survey and evaluation form. Revisions were made to clarify the wording of several items, and selected instructions were expanded according to the suggestions of the pretest respondents. Sections (or parts) were reorganized and items were reordered to improve sequencing of questions.

Final Instrument

The final research instrument (Appendix D) was printed on lavender paper as a tri-fold six-page booklet with the first page printed on official letterhead indicating the sponsor of the study. The explanatory letter addressed to the dietetic students/interns, printed on page one, included the objectives of the study, a request for participation, assurance of the anonymity of their responses, and instructions for completing the instrument. The transmittal letter was printed on the instrument to facilitate distribution to students and interns. Directors then would have only one form to handle, rather than a memo and a form.

Part I. The second page of the booklet, considered the first page of the actual survey, began with the title of the study, followed by Part I. This section included five demographic items: gender, marital and family status, age, and classification--junior, senior, or intern.

Part II. Questions in Part II were concerned with time of career selection and various influences on the student/intern's career decision. Questions 1 and 2 on time of career selection were adapted from those used by Stone et al. (8, 167), which were derived from a study by Lynch (170), who asserted that a major cause of career dissatisfaction is due to the early selection of a career. Item 3, also adapted from Stone et al., dealt with personal influences on the selection process. The sources listed included various people who might have been possible influences; other sources that Stone et al. included, such as literature, abilities or interests, career days, and job experience were included in other survey items. The rating scale for item 3 also was expanded from that used by Stone et al. to explain more fully the type of influence experienced by the respondents:

- 0 = Not applicable
- 1 = Not an influence in this decision
- 2 = Some influence; although the choice was mine, this person offered welcome support
- 3 = Major influence; this person's active encouragement was an important factor in my decision

A question was added to distinguish between the possible sources of influence and the single greatest influence on the selection of a college major. Two questions were added to inquire whether the dietetic students/interns had relatives in dietetics or another health-related profession, to determine if this was an influence on their career selection.

In one item (item 7), students/interns were asked to indicate the degree of importance they assigned to various considerations when making the decision to major in dietetics, using the following scale:

- 1 = Didn't consider
- 2 = Of some importance
- 3 = Very important

These considerations, which included the perceived intellectual challenge of the dietetics program, the appeal of the major as an outlet for interests, and the compatibility of a dietetics career with personal plans, were adapted from a study by Strange and Rea (169). One of the considerations in item 7 asked the respondents to rate the following statement in terms of its importance in their career decision:

Dietetics is accepted in our society as an appropriate career opportunity for women.

According to Strange and Rea (169), one dimension gaining increasing attention in the career development literature is the degree to which a student considers the sex appropriateness of a potential occupational choice. Little is known, they stated, about what specific issues students consider important in choosing a traditional vs. a nontraditional career path. In their study of career choice and sex-role concepts, Strange and Rea found that for both males and females in male- and female-dominated majors, whether or not their chosen major would provide an outlet for their interests was rated most important in making a decision. Similarly, across all groups, the sex appropriateness of their chosen major was reported to be least important. Neither sex reported much consideration of future marriage plans in making their career decision.

Item 8, also used by Stone et al. (8, 167), was adapted from the study by Lynch (170) and dealt with value influences on career selection, such as the potential in dietetics for a secure future, good salary, or opportunity for service to society. Students/interns were instructed to rate the degree to which each of the factors influenced their decision to select dietetics as a career, using the following scale:

- 1 = Not important
- 2 = Fairly important
- 3 = Quite important

The final question (item 9) in Part II was a multi-part item adapted from the survey used by Townsend and Mitchell (6) to study the career selection of occupational therapists. The influence of certain experiences (such as a family member/friend or self having received dietetic services) on the decision-making process of choosing dietetics as a career was examined. Other factors of potential influence used in the item were adapted from the Stone et al. (8, 167) study, in which literature, job experience, abilities or interests, and career days were examined to determine their degree of influence.

Part III. Items in Part III were concerned with family background, high school and college academic work and activities, and professional activities. Items 1 to 4 were designed to obtain information from respondents pertaining to the education and employment status of their parents. Blau and Duncan (74) suggested that a father's education and the social status of his occupation were significantly related to his offspring's educational attainment, which was, in turn, associated with the latter's attained job level. Steinberg (52) found that women in nontraditional careers (medicine and law) most frequently had fathers who were professionals and, in particular, fathers who were in the same occupation. A consistent finding in the literature of females' career choice is that daughters of employed women have higher academic and career aspirations and actual achievement than do daughters of nonemployed mothers (72, 83-85, 89-93). Research by Astin (100) indicated that having a college-educated working mother was related to a daughter's choice of a nontraditional occupation.

Additional items in Part III were adapted from the research instrument used by Aadland et al. (11), who studied the distinctive characteristics of students enrolled in seven different home economics majors. These items examined the high school experiences of the respondents. Questions dealt with school size (item 5), organizational participation (item 6), and academic performance (item 7). Aadland et al. found that students in home economics education and general home economics had more often attended small high schools. In addition, general home economics majors had lower high school grades and were more likely to have completed a high school home economics course than students in other majors. Foods and nutrition attracted some of the better academic students enrolled in home economics. Home economics education majors were distinguished by their greater participation in Future Homemakers of America (FHA) clubs, while foods and nutrition majors were least likely to have been a FHA member.

Questions were asked about the influence of both high school courses and college courses on the decision of a college major (items 9 and 10). The items on college experiences, also adapted from those used by Aadland et al., (11), dealt with academic performance (item 11) and organizational participation (item 12). Aadland et al. reported that foods and nutrition students were least likely to consider their high school teachers influential in their choice and rarely made their decision because of prior successes in high school home economics, although they often were motivated by a related college course.

Respondents' involvement in professional organizations and attendance at professional meetings were assessed using items from the Stone et al. (8, 167) instrument. These items (items 13 and 14) were modified from those used by Hadd (171), who studied state-level public administrators.

Part IV. Several items in Part IV were adapted from the Fargen et al. (10, 168) study of career patterns, interests, and aspirations of hospital dietitians and were designed to determine the students/interns' career interests and plans for graduate study. Items 1 and 2 were concerned with plans and area of interest for graduate study; for those without immediate plans, area of practice most desired for an entry-level position was identified in a multi-part item (item 3). Another item, also adapted from Fargen et al., requested the respondents' anticipated employment status in five and in 10 years (item 4).

Information pertaining to the career aspirations and objectives of the students/interns also was requested (item 5). Respondents were instructed to indicate the degree of appeal that 18 various dietetic positions held for them as a long-term career objective. All but one of the jobs were classified into five categories: management, clinical dietetics, private practice/consulting, teaching, and business/industry. Each category included two or more job titles. The other job rated was public health/community nutrition. Each job title was rated according to the following scale:

- 0 = Of no appeal
- 1 = Mildly appealing
- 2 = Quite appealing
- 3 = Very appealing

From the list of job titles, respondents were asked to indicate the position that best represented a professional ideal for them.

Part V. In Part V, Gould's (172) measures of career involvement, which he used to identify correlates of career effectiveness among public administrators, were modified slightly for use with a student sample. Each item was rated on a four-point Likert-type scale with anchors of

strongly agree to strongly disagree (items 1, a-e). According to Hall (5), career involvement connotes a psychological attachment or commitment to a career area.

Patchen's (173) measures for organizational identification were modified to measure professional identification. His questions were relevant to attitudes or behaviors directed toward close association with, or support of, the organization. These items were revised by substituting "profession" for "organization." The six measures of professional identification (items 2-7) were ranked from 1 (low) to 5 (high).

In two items, students/interns were asked to record reactions to hearing criticisms of the dietetic profession. In using these items in their survey of young dietitians, Stone et al. (8, 167) modified the original measure, as suggested by reviewers of their research instrument. Their pretest respondents indicated a different reaction might be elicited depending on who was criticizing the profession. Therefore, the original item from Patchen was divided into two items, one concerned with criticism by members of the profession and the other, criticism by persons outside the field.

Other measures were concerned with the frequency that students/interns talked about their education or chosen profession to family and friends. According to Patchen (173), one measure of organizational identification is the frequency with which an individual talks about the organization with family and others. The last two professional identification measures dealt with whether the respondents would select the dietetic profession again if given the opportunity, and whether they would recommend the dietetic profession as a career choice to a friend or relative.

Parts VI and VII. The Job Dimensions Blank (JDB) designed by Schletzer (174), and recommended as a measure for job satisfaction among professionals (175), was the basis for items to assess career motivation (Part VI) and potential sources of career satisfaction in dietetics (Part VII). McNeil et al. (176, 177) found that the JDB was effective as a job satisfaction measure among hospital foodservice administrators.

Of the 61 items on the JDB used by McNeil et al., Stone et al. (8, 167) initially identified 37 that were judged by their review panel to pertain to career characteristics and career satisfaction in their research of dietetic career choice and satisfaction. The pretest group in that study indicated five of the 37 were repetitious of other items, or were not applicable, so they were deleted from the final instrument. Each of the 32 items selected to assess characteristics important in a career were measured on a four-point scale:

- 1 = Of minor or no importance
- 2 = Fairly important
- 3 = Quite important
- 4 = Very important

The same 32 items in Part VI for assessing career importance were used in Part VII to identify potential sources of career satisfaction. The items were reordered randomly to encourage independent responses on importance and satisfaction ratings. Students/interns were instructed to rate the items in terms of the degree of satisfaction they believed they would receive from their chosen career in the dietetic profession. The potential career satisfaction items were measured on a five-point scale:

- 1 = Very dissatisfied
- 2 = Dissatisfied
- 3 = Unsure or undecided
- 4 = Satisfied
- 5 = Very satisfied.

Distribution of the Instrument

A cover letter (Appendix E), providing instructions and expressing appreciation to the directors for assisting with the study, was mailed with the appropriate number of questionnaires to the 166 participating programs in December 1983. A copy of the questionnaire also was attached to the cover letter for the director's files. Directors were instructed to distribute the questionnaires to the students/interns in their program who were willing to participate in the study. A form (Appendix E) was enclosed for directors to confirm the number of students or interns in the program and to report the number of forms distributed.

Each questionnaire was assigned a code number to permit summarizing results by program. Individual names were not requested and the students/interns were assured their names would not be linked to their responses in any way. After completing the survey form, the students/interns were instructed to seal the survey in the envelope that was attached to each questionnaire and return it to their program director. A large self-addressed stamped envelope was included in the packet of materials sent to program directors for them to return the completed questionnaires.

An acknowledgment letter (Appendix F) was mailed to program directors upon the receipt of the questionnaires from their program. Nine weeks following the initial mailing, after the Christmas holiday break, a follow-up letter (Appendix F) was sent to program directors not responding to the first mailing. Three weeks later, phone calls were made to contact nonrespondents.

Of the participating programs with directors who had agreed to assist with the study, questionnaires were returned from all but two programs.

A total of 2,033 instruments were returned from CUP students and dietetic interns by the program directors, or 86% of those distributed (Table 1).

Table 1. Dietetic program participation and return of research instrument

	group ¹			
	CUP		intern	
	N	%	N	%
dietetic program directors ²				
initial agreement to assist	64	100 ³	102	97 ³
final agreement to assist	64	100	100	95
dietetic students/interns				
prospective sample ⁴	1489		888	
final sample ⁵	1233	83	800	90

¹Group: CUP = coordinated undergraduate programs in dietetics; intern = dietetic internship programs.

²Program directors were contacted by mail to request assistance with the study.

³% of programs in 1984 Directory of Dietetic Programs (166).

⁴Number of students/interns identified by directors as enrolled in programs participating in study.

⁵The number and percentage of questionnaires returned from an initial and follow-up mailing and a follow-up phone call to program directors.

Data Analyses

Programs and routines in the Statistical Analysis System (SAS) were used for all data analyses (178). Absolute and relative frequencies were compiled for all items on the research instrument and mean scores were computed, as appropriate. Scores computed from the data are summarized in Table 2. Item scores were used in analyses of effects of several

Table 2. Computation of scores

item scores	item no. ¹	computation	
sources of influence on career decision	II.3 a-p	Scale = 1, not an influence to 3, major influence	
experiences influencing career decision	II.9 a-i	Scale = 1, not important to 3, very important	
considerations influenc- ing choice of dietetic major	II.7 a-e	Scale = 1, didn't consider to 3, very important	
value influences on career decision	II.8 a-f	Scale = 1, not important to 3, quite important	
important character- istics of a career	VI. a-ff	Scale = 1, of minor or no importance to 4, very important	
potential sources of satisfaction in the dietetic profession	VII. a-ff	Scale = 1, very dissatisfied to 5, very satisfied	
career involvement	V.1 a-e	Scale = 1, strongly disagree to 4, strongly agree (reversed from response code)	
preferred area of dietetic practice for initial job	IV.3b a-g	Rank order = 1, first choice to 7, last choice	
score	item no.	computation	maximum score
professional identifica- tion score	V.2-7	Σ of item scores Scale = 1, low to 5, high	30
home economics orientation	II.2b	Σ of following items: 2 pts., if chose a home economics career before dietetics; 1 pt., if had other choice	26

¹Refers to part (I-VII) and item number in the research instrument, which is included in Appendix D.

Table 2. (cont.)

score	item no.	computation	maximum score
home economics orientation (cont.)	III.6 a,b	2 pts., if a member; 3 pts., if an officer in 4-H or FHA; 1 pt., if not a member	
	III.8 (5),(6)	2 pts., if completed high school home economics course; 1 pt., if had not	
	III.9b	2 pts., if high school home economics influenced career choice; 1 pt., if not	
	III.12 a,b	2 pts., if a member; 3 pts., if an officer; 1 pt., if not a member of college 4-H/FHA or home economics council	
	III.13 (1)	2 pts., if a member of AHEA; 1 pt., if not	
career importance factor scores: ²	VI. a-ff	Σ of item scores as indicated below:	
I. Prestige		l,k,x,n	16
II. Monetary Reward		f,o,cc	12
III. Independence/ Self-sufficiency		i,e,d,j,ff,q,r	28
IV. Professional Challenge		ee,bb,dd,ff	16
V. Self-realization		h,y,g,c,i,j,m	28
VI. Social Service		u,a,s,z,aa	20
VII. Social Stimulation		w,v,p	12

²Refer to Table 3 for results of principal component analysis, which provided the basis for constructing career importance factor scores from the 32 importance items.

Table 2. (cont.)

score	item no.	computation	maximum score
potential career satisfaction factor scores: ³	VII. a-ff	Σ of item scores:	
I. Professional Challenge		n,m,cc,j,h,x,u,c,k,a,q,o	60
II. Service to Others		t,bb,ee,s,u,e	30
III. Financial		w,i,aa,z,r,g,k,f,l	45
IV. Professional Power		r,g,k,f,l	25
V. Prestige		p,b,v,dd	20
VI. Professional Stimulation		y,d,ff,dd	20
overall potential career satisfaction	VII. a-ff	$100 + \left[\frac{\text{no. of satisfied or very satisfied responses}}{32} \times 100 \right] - \left[\frac{\text{no. of dissatisfied or very dissatisfied responses}}{32} \times 100 \right]$	200
career involvement score	V.1 a-e	Σ of item scores, V.1a-e	20

³Refer to Table 4 for principal component analysis, which provided the basis for constructing potential career satisfaction factor scores from the 32 satisfaction items.

Table 2. (cont.)

score	item no.	computation	maximum score
career interest scores:	IV.5a a-r	Averages of ratings of degree of appeal of two or more jobs in each area of practice (as indicated below). Scale = 0, of no appeal to 3, very appeal- ing	.
management		positions--a,b,i,j	3
clinical		positions--c,d,e	3
teaching		positions--f,g,h	3
private practice/ consulting		positions--k,l	3
business/industry		positions--n,o,p,q,r	3

variables, as explained below. Also, several scores were computed from combinations of various item scores, as outlined in Table 2; for these scores, the maximum score also is shown. Many scores were patterned on those used by Stone (167).

In the Stone et al. (8) study, principal component analysis was used to identify career importance factor scores and career satisfaction factor scores (179). The factor loadings and reliability from that analysis are shown in Tables 3 and 4. They used coefficient alpha (180) for estimating reliability. All scores were sufficiently reliable for analyzing group data. The same method for computing scores from the career importance (Part VI) and potential career satisfaction (Part VII) items was used in this study to permit comparisons with Stone's findings.

Data analyses are summarized in Table 5. Cross tabulations were compiled for most items to compare responses of CUP students and interns. One-way analysis of variance (Table 5) was used for comparing mean scores on selected item scores, the professional identification score, and the two grade point averages for CUP students and dietetic interns. General linear model analysis of variance was used to examine the effects of three variables on selected research measures. These three independent variables were group (CUP vs. intern), professional identification, and home economics orientation. The use of professional identification as an independent variable was based on the findings of Stone et al. (8, 167) who found that a measure of professional identification had a significant effect on several variables in their study of young dietitians. Home economics orientation was adapted from the description of a "typical" or "traditional" home economics student by Aadland et al. (11). They found that foods and nutrition students, which included dietetics majors, were

Table 3. Principal component analysis and reliability of career importance items¹

item number ²	item	factor loading	coefficient alpha
Factor I. <u>Prestige</u> (24.7) ³			.82
l.	prestige in profession	.76	
k.	prestige on the job	.75	
x.	prestige in the community	.63	
n.	recognition from colleagues	.55	
Factor II. <u>Monetary Reward</u> (8.3)			.86
f.	earnings	.87	
o.	prospects for future earnings	.77	
cc.	financial security	.69	
Factor III. <u>Independence/Self-sufficiency</u> (8.1)			.75
i.	opportunity to use initiative	.55	
e.	opportunity for promotion	.47	
d.	opportunity to be own boss	.44	
j.	freedom to use own judgment	.44	
ff.	chance to evaluate own work	.42	
q.	opportunity to help in policy making	.41	
r.	opportunity for travel	.38	
Factor IV. <u>Professional Challenge</u> (4.9)			.78
ee.	opportunity to use learned skills	.73	
bb.	opportunity to use education	.63	
dd.	intellectual challenge	.61	
ff.	chance to evaluate own work	.45	
Factor V. <u>Self-realization</u> (4.8)			.79
h.	opportunity to use aptitudes and abilities	.65	
y.	personal satisfaction	.56	
g.	chance to improve skills	.52	

¹Results of principal component and reliability analyses performed on data from study of Stone et al. (8) on career selection and related variables among young (≤ 30 years) dietitians (N = 367). These analyses provided basis for constructing scores for this study.

²Refers to item number in Part VI of survey instrument.

³% of overall variance accounted for by each factor.

Table 3. (cont.)

item number	item	factor loading	coefficient alpha
c.	feeling of achievement	.50	
i.	opportunity to use initiative	.45	
j.	freedom to use own judgment	.42	
m.	chance to see results of work	.37	
Factor VI. <u>Social Service</u> (4.0)			.68
u.	opportunity to help others find success/happiness	.73	
a.	opportunity to improve comfort/ appearance of others	.63	
s.	opportunity to improve health of others	.58	
z.	opportunity to do socially significant tasks	.51	
aa.	feeling of being needed	.41	
Factor VII. <u>Social Stimulation</u> (3.7)			.71
w.	interesting colleagues	.79	
v.	fun and relaxation with colleagues	.61 ⁴	
p.	intelligent, competent colleagues	.35 ⁴	

⁴Item deleted from factor score to increase reliability.

Table 4. Principal component analysis and reliability of career satisfaction items¹

item number ²	item	factor loading	coefficient alpha
Factor I. <u>Professional Challenge</u> (33.8) ³			.91
n.	opportunity to use learned skills	.76	
m.	opportunity to use education	.75	
cc.	opportunity to use aptitudes and abilities	.73	
j.	intellectual challenge	.72	
h.	opportunity to use initiative	.62	
x.	personal satisfaction	.57	
u.	feeling of achievement	.54	
c.	chance to improve skills	.50	
k.	opportunity to be own boss	.50	
a.	freedom to use own judgment	.49	
q.	variety of activities required	.48	
o.	chance to see results of work	.33	
Factor II. <u>Service to Others</u> (7.1)			.82
t.	opportunity to improve comfort/ appearance of others	.69	
bb.	opportunity to improve health of others	.66	
ee.	opportunity to help others find success/happiness	.56	
s.	opportunity to do socially significant tasks	.45	
u.	feeling of achievement	.44	
e.	feeling of being needed	.43	
Factor III. <u>Financial</u> (5.8)			.84
w.	earnings	.83	
i.	financial security	.78	
aa.	prospects for future earnings	.71	
z.	opportunities for promotion	.46	

¹Results of principal component and reliability analyses performed on data from study of Stone et al. (8) on career selection and related variables among young (< 30 years) dietitians (N = 355). These analyses provided basis for constructing scores for this study.

²Refers to item number in Part VII of survey instrument.

³% of overall variance accounted for by each factor.

Table 4. (cont.)

item number	item	factor loading	coefficient alpha
Factor IV. <u>Professional Power</u> (5.0)			.72
r.	opportunity to help in policy making	.56	
g.	opportunity to direct work of others	.47	
k.	opportunity to be own boss	.46	
f.	chance to evaluate own work	.41 ⁴	
l.	opportunities for travel	.30 ⁴	
Factor V. <u>Prestige</u> (4.0)			.76
p.	prestige on the job	.61	
b.	prestige in your profession	.55	
v.	prestige in the community	.42	
dd.	recognition from colleagues	.38	
Factor VI. <u>Professional Stimulation</u> (3.8)			.74
y.	interesting colleagues	.74	
d.	fun and relaxation with colleagues	.59	
ff.	intelligent, competent colleagues	.58	
dd.	recognition from colleagues	.38	

⁴Item deleted from factor score to increase reliability.

Table 5. Summary of data analyses¹

type of analysis	independent variable ²	item no. ³	dependent variable ⁴
chi square (χ^2)	group	III.5	size of high school
		III.8 (1)-(10)	high school courses taken
		III.6 a-f	high school activities
		III.12 a-g	college activities
		II.7 a-e	considerations in selecting college major
		II.8 a-f	value influences on career choice
		III.13, 14a-d	professional involvement activities

¹All analyses conducted using SAS (Statistical Analysis System) (178).

²Independent variables--

Group: CUP--juniors or seniors in coordinated undergraduate programs

Intern--students in dietetic internship programs

Professional identification: Groups defined as low or high based on score computed from sum of 6 items (V.2-7).

Low = scores < mean

High = scores $\geq$ mean

Mean = 21.32

Home economics orientation: Groups defined as low or high based on score computed from reports of home economics-related experiences.

Low = scores < mean

High = scores $\geq$ mean

Mean = 8.62

³Refers to part (I-VII) and item number in the research instrument, which is included in Appendix D.

⁴Refer to Table 2 for computation of scores.

Table 5. (cont.)

type of analysis	independent variable	item no.	dependent variable
chi square (χ^2) (cont.)		V.1a-e	career involvement items
		V.2-7	professional identification items
		IV.1a,b,2	educational plans
general linear model analysis of variance (1 way)	group	III.7	high school GPA
		III.11	college GPA
		VI.a-ff	career importance ratings
		VII.a-ff	potential career satisfaction ratings
		V.2-7	professional identification score
general linear model analysis of variance (3 way)	group, professional identification, home economics orientation	II.3,a-p	sources of influence ratings
		II.9,a-i	importance of experience ratings
		II.7,a-e	importance of consideration ratings
		II.8, a-f	importance of value influences ratings
		VI.	career importance factor scores
		VII.	potential career satisfaction factor scores
			overall potential satisfaction score
		V.1,a-e	career involvement ratings

Table 5. (cont.)

type of analysis	independent variable	item no.	dependent variable
general linear model analysis of variance (3 way) (cont.)			career involvement score
		IV.3b a-g	rank of preferred area of practice for initial job
		IV.5a a-r	career interest scores
variables correlated			
correlation (Pearson's r)			career importance factor scores
			potential career satisfaction factor scores
			career importance with potential career satisfaction factor scores
			career involvement, professional identification, professional involvement, and potential career satisfaction scores
			career interest scores
			career importance factor scores with career interest scores
			potential career satisfaction factor scores with career interest scores

somewhat low in home economics orientation when compared to other home economics majors and were less likely to be involved in home economics-related organizations and activities. Also, since most dietetic programs are in a home economics academic unit, the analyses were designed to examine if home economics orientation had an effect on selected study variables. The method for computing the scores for professional identification and home economics orientation were included in Table 2. For the analysis of variance, groups for these two variables were formed based on the mean scores. Those with scores equal to or above the mean were considered high and those scoring below the mean were placed in the low group for both variables. Correlations (Pearson's r) also were computed between a number of measures, as outlined in Table 5.

RESULTS AND DISCUSSION

Background and Characteristics of the Study Sample

Research instruments were returned from 1,233 CUP students and 800 dietetic interns, for a final sample of 2,033. The demographic characteristics of the study sample are shown in Table 6. As expected, most of the respondents were female. Of the combined group of dietetic students and interns, females constituted 97%--the same percentage of female dietitians reported in the 1981 census of The American Dietetic Association (14). Slightly more males were found to be in coordinated undergraduate programs (CUPs) than in internships, yet both percentages were small.

As one of the recommendations regarding dietetic manpower, the 1984 Study Commission on Dietetics (181), which recently completed its work under a grant from the W.K. Kellogg Foundation to The American Dietetic Association Foundation, identified the need to recruit males to the profession. While there has been no effort to restrict males from ADA membership, the Commission's report stated, neither has there been effective effort to recruit them.

Because of the very small number of males in the final sample ($N = 74$) in comparison to the number of females ($N = 1,959$), males were excluded from the analyses. Also, as indicated in the literature review, men's career objectives and patterns tend to be quite different from those of females (28, 37-41). Therefore, data from the 1,179 female CUP students and the 780 female interns were the sample for the analyses. A few respondents failed to complete all items on the research instrument; as

Table 6. Characteristics of the study sample

characteristic	group ¹	
	CUP (N = 1179) ²	intern ² (N = 780) ²
	%	%
gender		
female	95.6	97.5
male	4.4	2.5
age in years		
20-22	42.7	1.3
23-25	36.0	71.3
26-29	10.0	19.3
30-39	9.2	6.3
40 or older	2.1	1.8
marital status		
married	19.8	19.3
not married	80.2	80.7
children		
none	90.4	94.4
infants	.8	.6
preschool	2.8	2.4
school age or older	7.1	3.7

¹CUP = junior and senior students in coordinated undergraduate programs (N = 1233); intern = students in dietetic internship programs (N = 800).

²Number of females in sample; all %'s are based on number of females with the exception of gender. Because of the small number of males in the study (N = 74), most of the analyses excluded male respondents.

a result, N varies on individual items as reported in the presentation of results.

For the most part, the age of the respondents was typical for their respective group, with the interns being slightly older, as expected, and the CUP students closer to the ages of 20 to 22, as both juniors and seniors were surveyed (Table 6). A larger number of students/interns than expected, however, were found to be out of the typical age range; about 20% of the CUP students and more than 25% of the interns were 26 or older, indicating that many of the respondents had chosen dietetics after another major, or perhaps after another career. The majority of both students and interns were not married and did not have children. Of those who reported having children, the largest percentage had children who were school age or older.

In examining the high school experiences of the respondents, most students/interns graduated from a medium- to large-size high school (Table 7). Aadland et al. (11) also found this to be true in their survey of home

Table 7. Size of high school graduating class of dietetic students/interns

size of high school graduating class	group	
	CUP (N = 1166)	intern (N = 776)
	%	%
less than 50	10.1	5.3
50 to 149	20.6	17.9
150 to 399	36.0	39.7
400 or more students	33.3	37.1

$$\chi^2 = 18.74, P \leq .001$$

economics majors at southern land-grant universities. Home economics education and general home economics students in their sample came from more rural backgrounds and attended smaller high schools than did foods and nutrition students and other home economics majors.

As indicated in Table 8, the majority of students/interns had completed high school courses in biology, chemistry, advanced algebra, and trigonometry. About 40% had taken a foods class and about 60% had taken another home economics course. The average high school grade point average (GPA) of the total group was 3.47 on a 4.0 scale (Table 9) and a large number of students/interns participated, either as a member or a leader, in student council and honoraries/honor societies (Table 10). Few respondents were involved in 4-H or Future Homemakers of America (FHA). These data are consistent with the results reported by Aadland et al. (11), who found that the foods and nutrition curricula attracted some of the better academic students enrolled in home economics and, when compared to other home economics students, the foods and nutrition majors were least likely to have been involved in high school home economics-related activities. In examining college activities, less than 3% of the respondents participated in college 4-H or FHA, while a vast majority were involved in departmental clubs such as the Student Dietetic Association (Table 11). The average college GPA of the total group was 3.33 on a 4.0 scale.

In examining the high school experiences of CUP students vs. interns, several differences were noted. Interns tended to graduate from larger high schools, have a somewhat stronger background in science and math, make better grades, and were members more frequently of honoraries or honor societies. A similar pattern was true in college as well. Interns

Table 8. Percentage of dietetic students/interns who completed selected high school courses

high school courses completed	group		χ^2
	CUP ¹	intern ²	
	%	%	
anatomy/physiology	24.1	30.5	9.61**
biology	95.2	95.7	.32
chemistry	80.2	84.7	6.26**
physics	29.7	34.6	5.29*
foods	48.4	48.1	.01
other home economics courses	58.6	59.7	.26
computer science	7.3	7.5	.02
advanced algebra	77.0	83.7	12.91***
calculus	18.1	20.5	1.73
trigonometry	53.2	58.8	6.03**

¹N varies from 1163 to 1166.

²N varies from 774 to 776.

* $P \leq .05$

** $P \leq .01$

*** $P \leq .001$

Table 9. Grade point average (GPA) in high school and college of dietetic students/interns

GPA ¹	N	total sample	group		F value
			CUP	intern	
			mean and std. error		
high school	1795	3.47	3.41 ±.01	3.52 ±.02	31.31***
college	1908	3.33	3.24 ±.01	3.37 ±.01	54.35***

¹Based on 4.0 scale.

*** $P \leq .001$

Table 10. Selected high school activities of dietetic students/interns

activity	group	% reporting involvement ¹		χ^2
		participated as a member	participated as a leader or officer	
		%	%	
4-H	CUP ²	9.6	7.7	.28
	intern ³	8.9	7.7	
Future Homemakers of America (FHA)	CUP	8.9	7.4	1.60
	intern	8.9	6.2	
science clubs	CUP	27.6	4.6	.86
	intern	29.4	4.6	
student council/ government	CUP	21.4	23.0	2.39
	intern	22.5	22.5	
honorarys	CUP	41.3	14.0	13.65**
	intern	47.2	16.6	
debate/forensics	CUP	7.5	2.3	2.52
	intern	7.4	1.4	

¹Differences in 100% and percentages reported are accounted for by those who did not participate in each activity.

²N varies from 1128 to 1140.

³N varies from 740 to 757.

** $P \leq .01$

Table 11. Selected college activities of dietetic students/interns

activity	group	% reporting involvement ¹		χ^2
		participated as a member	participated as a leader or officer	
		%	%	
college 4-H and/or FHA	CUP ²	1.3	.9	5.20
	intern ³	1.8	.9	
home economics council	CUP	9.8	5.4	82.74***
	intern	21.3	11.9	
college-level council (not home economics)	CUP	7.1	5.2	22.69***
	intern	11.6	8.7	
student senate	CUP	3.4	2.1	8.12*
	intern	2.5	3.2	
honorary or honor societies	CUP	30.4	6.9	109.56***
	intern	44.1	16.7	
departmental clubs	CUP	46.2	18.0	48.48***
	intern	46.6	29.6	
sorority or fraternity	CUP	8.3	9.9	10.32*
	intern	8.9	14.7	

¹Differences in 100% and percentages reported are accounted for by those who did not participate in each activity.

²N varies from 1098 to 1134.

³N varies from 717 to 756.

* $P < .05$
 *** $P \leq .001$

had a higher mean GPA and were more involved in all activities reported in Table 11, including honoraries and departmental clubs. These findings may be partially accounted for by the highly selective process of dietetic internships that calls for a high GPA. In addition, the time demands during the junior and senior years in the CUP program might have prevented CUP students from participating in extracurricular activities. Without the requirements of both didactic and clinical hours in the traditional Plan IV program, interns may have had more flexibility in their schedules during their junior and senior years and, thus, could become more involved in outside activities during college. Aadland et al. (11), however, found that foods and nutrition students were less involved in college organizations than were other home economics students.

Career Selection

Time of Career Selection

Data on time of selecting dietetics as a career are presented in Tables 12 and 13. Dietetics was not a first career commitment for more than 60% of the dietetic students and interns (referred to as "later selectors"). Of those selecting dietetics initially (referred to as "first selectors"), more than 50% chose their career before college. Less than 20% selecting another area first, chose dietetics before college. A majority selecting another area initially (> 60%) chose it during their second year of college or later (Table 12). About half of both the CUP and intern groups chose dietetics during the second year of college or later (Table 13).

Previous career choices of the later selectors are listed in Table 14. The most frequent career choice prior to dietetics was a health-related

Table 12. Time of selecting dietetics as a career choice in relation to initial choice

time	first choice of career ¹	
	those selecting dietetics (N = 750)	those selecting other field (N = 1200)
	%	%
before college	52.1	17.8
first year of college	19.6	19.6
second year of college	19.4	32.4
third or fourth year of college	5.3	12.3
after graduation or after another career	3.6	17.9

$$\chi^2 = 306.8, P \leq .001$$

Table 13. Career selection of dietetic students/interns

	group	
	CUP (N = 1176)	intern (N = 778)
	%	%
first choice of career field		
dietetics (first selectors)	37.1	40.5
other field (later selectors)	62.9	59.5
time of career choice in dietetics		
before college	32.1	29.3
first year of college	18.4	21.5
second year of college	26.9	28.1
third or fourth year of college	9.5	9.8
after graduation or after another career	13.1	11.3

Table 14. Previous career choices of later selectors¹

career choices other than dietetics	previous choices		
	initial (N = 1190)	second (N = 568)	third (N = 176)
	← % →		
home economics	7.0	6.9	6.3
other nutrition or foodservice major	2.0	1.8	5.2
restaurant management	1.3	1.9	3.4
nursing	10.4	9.9	6.3
medicine/dentistry	9.6	8.3	6.3
allied health	12.5	10.9	9.7
other health	9.3	10.4	12.0
athletics, coaching and related major	1.4	3.0	4.0
education (not home economics)	10.0	9.5	5.7
business and related major	9.2	8.8	5.7
other professional major	11.4	11.4	12.5
humanities and social sciences	5.0	6.0	8.6
biology or physical sciences	5.1	7.4	7.4
journalism/media/public relations	3.4	2.6	2.9
homemaking or no career	2.4	1.2	4.0

¹Those selecting other careers initially before selecting dietetics.

profession. Allied health careers listed included medical technology, occupational therapy, social work, and physical therapy; "other health careers" included pharmacy, veterinary medicine, and psychology. Nursing, education, or professions such as business, engineering, or law (categorized in Table 14 as "other professional major"), were additional career choices frequently made prior to selecting dietetics; other nutrition, foodservice, or home economics careers were reported less frequently. These data indicate that most initial choices were a professional area; few had been liberal arts majors before choosing dietetics.

In the sample of young dietitians in the Stone et al. (8) study, the respondents were more evenly divided between those selecting dietetics as their first choice (N = 196) and those selecting another career first (N = 197), than was true for the students and interns in this study. Similarly, however, Stone et al. reported that a majority of dietitians selecting another area first ($\approx 60\%$) chose it during their second year of college or later; they also found that previous choices generally were other professional areas.

Academic Courses Influencing Career Choice

More than 75% of the CUP students and interns were not influenced in their career choice by a high school course (Table 15). More of the respondents were influenced to select dietetics by a high school science or health class than by a home economics class, yet both percentages were low.

A somewhat higher percentage of students and interns were influenced to select dietetics by a college course; however, less than 50% were influenced by academic course work (Table 16). For those who were influenced, a foods and nutrition course was reported most frequently by

Table 15. High school courses influencing selection of dietetics as a college major

course	group	
	CUP (N = 1175)	intern (N = 776)
	%	%
none	80.7	76.1
home economics	9.4	10.1
science/health/other	9.9	13.8

Table 16. College courses influencing selection of dietetics as a college major

course	group	
	CUP (N = 1174)	intern (N = 773)
	%	%
none	60.9	52.3
foods and nutrition	28.5	36.4
other home economics	1.6	2.1
science	6.5	6.8
other	2.0	1.4
not indicated ¹	.5	1.0

¹Some respondents reported they were influenced by a college course, yet did not specify which course.

both students (> 25%) and interns (> 35%). Aadland et al. (11) found that foods and nutrition students rarely made their choice of this major because of prior success in home economics, although they were motivated by a related college course. The results suggest that an introductory foods and nutrition class in college has the potential to be an effective means of recruiting students to dietetics.

Sources of Influence

As indicated in Table 17, the sources least influential on the selection of dietetics as a career were associated with the respondents' high school experiences. High school friends, teachers, and counselors frequently had not been sources of influence for both students and interns. Foods and nutrition students in the Aadland et al. (11) study were the least likely of all home economics majors to consider their high school teachers or principals to be influential in their choice of this major. Home economics education and general home economics students in their sample, however, did perceive high school home economics teachers as influential in their decision. Sauter et al. (123) found that college women who made traditional career choices were significantly more likely than those making nontraditional career choices to report they were influenced by guidance counseling. In their study, Stone et al. (8) found that young dietetic professionals had not been influenced by high school teachers or counselors in their career choice.

Dietetic students and interns reported that the greatest sources of influence on their selection of a career came from college faculty, dietetic professionals, and mother. Similar results were reported by Stone et al. (8).

Table 17. Sources of influence on selection of dietetics as a career

source of influence	degree of influence ¹				greatest source of influence ²
	not applicable	not an influence	some influence	major influence	
	← % →				%
father	9.6	45.8	37.9	6.7	6.3
mother	4.5	28.9	51.6	15.0	17.6
brother or sister	11.8	62.3	22.4	3.5	3.6
other relative	19.7	58.9	16.3	5.1	4.2
family friends	17.2	60.6	18.9	3.3	1.9
high school friends	20.9	67.9	10.0	1.2	.8
high school teacher	22.2	61.0	11.7	5.1	4.7
high school counselor	23.9	66.7	8.0	1.4	1.0
college counselor	18.7	54.4	18.7	8.2	2.5
college faculty	12.0	41.3	27.5	19.2	12.8
academic adviser in college	13.5	48.5	23.8	14.2	7.8
students in dietetic program	14.3	45.6	27.3	12.8	5.7
other college friends	14.0	56.5	23.9	5.6	3.2
dietetic professionals	12.9	38.9	29.5	18.7	13.5
other healthcare professionals	19.1	52.1	21.9	6.9	2.3
other	61.4	31.0	2.8	4.8	12.1

¹N varies from 1904 to 1928.

²Respondents (N = 1822) also were asked to indicate which one of the sources had the greatest influence.

Almquist and Angrist (83) found that career-oriented students were influenced most strongly by college professors and occupational role models. Almquist (109) found that female students in male-dominated curricula were influenced by someone they knew who was employed in her chosen occupation or, more often, by one or more college professors. She suggested that such role models aid students in understanding the nature of particular work roles, help them to evaluate their own qualifications, performance, and abilities, and encourage them to attend graduate school. Personal contact from professionals in the field was the most effective recruitment technique for occupational therapy and medical laboratory science students (6, 110, 111). Mothers were found to be the most influential source of influence on the choice of home economics as a major in a study reported by Stout et al. (58).

The category "other" in Table 17 was the fourth greatest source of influence indicated by the students and interns. When asked who had the greatest influence on their selection of a major from a list of 15 persons, more than 10% of the respondents wrote "no one" or "myself." Weishaar et al. (82), in their study of the primary influencers of career choices for college women, found that 45% of all female students surveyed indicated that no one had influenced their choice of major. Goodale and Hall (129) held that a young woman's career plans may be dependent on her own goals and ambitions. Several of the students/interns responding with "no one" or "myself" as the greatest influence to select dietetics indicated that they themselves had a weight problem or an eating disorder, such as anorexia nervosa or bulimia, and, thus, independently became interested in nutrition to try and change their own dietary habits.

In Table 18, the effects of selected variables on the degree of perceived influence of various sources on the selection of dietetics as a career are examined. Several significant differences were found between the ratings of CUP students vs. interns, and between those respondents with low vs. high professional identification (labeled according to scores based on the sum of responses to six items on the research instrument concerned with professional identification), and between respondents categorized as low vs. high home economics-oriented (divided by scores developed as an index based on reports of home economics-related courses and activities). Interns were more influenced than were CUP students in their career choice by mother, brother/sister, other relative (which included spouse), college counselor, college faculty member, students in the dietetic program, and other college friends. Respondents categorized as having high professional identification were more influenced than were those with low professional identification by both parents, family friends, college faculty member, college academic adviser, students in the dietetic program, dietetic professionals, and other healthcare professionals. Those who had a more extensive background in home economics-related experiences were more influenced than were those categorized as low home economics-oriented by a high school counselor and a high school teacher--presumably a home economics teacher, which is consistent with the findings of Aadland et al. (11). College counselor, college academic adviser, students in dietetic program, and other relatives were additional sources rated significantly more influential for high home economics-oriented respondents. Mother was consistently selected as the most influential on their decision to select dietetics for all of the selected groups identified in Table 18.

Table 18. Effects of selected variables on ratings of sources of influence on decision to select dietetics as a career¹

source of influence	group ²		professional identification ³		home economics orientation ⁴	
	CUP	intern	low	high	low	high
	← least squares means ⁵ and std. error →					
father	1.41 ±.02	1.43 ±.03	1.36 ±.02	1.48 ±.02	1.43 ±.02	1.40 ±.02
mother	1.74 ±.02	* 1.82 ±.03	1.70 ±.02	1.87 ±.02	1.77 ±.02	1.79 ±.02
brother/sister	1.15 ±.02	* 1.22 ±.02	1.16 ±.02	1.21 ±.02	1.18 ±.02	1.19 ±.02
other relative	1.04 ±.02	* 1.12 ±.03	1.06 ±.02	1.09 ±.02	1.04 ±.02	* 1.12 ±.02

¹N varies from 1896 to 1915.²Group: CUP = juniors or seniors in coordinated undergraduate programs; intern = students in dietetic internships.³Professional identification: Score computed based on sum of responses to six items concerned with professional identification. Low = those with scores < mean; high = $\geq$ mean.⁴Home economics orientation: Sample divided into groups based on mean score computed from reports of home economics-related experiences. Low = those with scores < mean; high = $\geq$ mean.⁵Means adjusted for effects of all variables considered in the analysis (i.e., group, professional identification, home economics orientation). Scale = 1, not an influence to 3, major influence.⁶Refer to Table 49 in appendix for F values.

Means significantly different,

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 18. (cont.)

source of influence	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	← least squares means and std. error →					
family friends	1.09 ±.02	1.07 ±.03	1.01 *** ±.02	1.15 ±.02	1.08 ±.02	1.09 ±.02
high school friends	.90 ±.02	.93 ±.02	.89 ±.02	.94 ±.02	.90 ±.02	.93 ±.02
high school teacher	.98 ±.02	1.02 ±.03	.99 ±.02	1.02 ±.02	.89 *** ±.02	1.12 ±.02
high school counselor	.85 ±.02	.89 ±.02	.87 ±.02	.87 ±.02	.84 * ±.02	.90 ±.02
college counselor	1.13 ±.02	* 1.21 ±.03	1.14 ±.03	1.20 ±.03	1.13 * ±.03	1.21 ±.03
college faculty member	1.44 ±.03	*** 1.69 ±.03	1.50 ±.03	** 1.63 ±.03	1.53 ±.03	1.60 ±.03
academic adviser in college	1.24 ±.03	*** 1.61 ±.03	1.34 ±.03	*** 1.51 ±.03	1.36 *** ±.03	1.49 ±.03
students in dietetic program	1.32 ±.03	*** 1.49 ±.03	1.34 ±.03	** 1.47 ±.03	1.36 * ±.03	1.45 ±.03
other college friends	1.18 ±.02	* 1.25 ±.03	1.19 ±.02	1.25 ±.02	1.21 ±.02	1.23 ±.02
dietetic professionals	1.52 ±.03	1.56 ±.03	1.44 ±.03	*** 1.65 ±.03	1.51 ±.03	1.58 ±.03
other healthcare professionals	1.16 ±.02	1.19 ±.03	1.12 ±.03	** 1.22 ±.03	1.14 ±.03	1.20 ±.03

The education and occupation of the respondents' parents are reported in Table 19. About half of the respondents' fathers had a bachelor's degree or above, such as a master's or professional degree (M.D., D.D.S., etc.). The percentage of mothers with at least a bachelor's degree was lower, less than 35%. Almost all of the parents had at least a high school diploma. Both mothers and fathers were employed in a wide range of areas. The largest percentage of fathers were in the professional/technical category (> 35%); one-fourth of the mothers were in this category, but the largest percentage of mothers were in the homemaker category (34.4%). A small percentage of their fathers or mothers were in agriculture.

Murphy and Bosard (56) and East (60) found that the "typical" home economics student came from lower-middle-class families and had parents who had not attended college. Steinberg (52) investigated the backgrounds of women home economists, nurses, homemakers, physicians, and lawyers. Her results indicated that the typical home economist's mother was a homemaker with a high school degree, and her father was a farmer or other nonprofessional who had less education than the fathers of the other groups of women in the study, often less than a high school education. In comparing students in seven different home economics majors, Aadland et al. (11) reported that the fathers of home economics education and general home economics students frequently had less education than did the fathers of students in foods and nutrition and other home economics curricula.

Much of the research examining parental influence on career choice identifies both education and occupation as important variables. A consistent finding in the literature on females' career choice is that daughters of employed women have higher academic and career aspirations and actual achievement than do daughters of nonemployed mothers (72, 83-85,

Table 19. Education and occupation of parents of dietetic students/
interns¹

educational level/occupation	father	mother
	%	%
education		
no degree of diploma	10.6	8.1
high school diploma	32.3	44.6
associate degree	8.1	12.6
bachelor's degree	26.2	25.5
master's degree	10.6	7.7
professional degree ²	7.6	1.2
earned doctorate ³	4.6	.3
occupation		
professional, technical	35.9	24.3
managerial	7.2	1.9
clerical	1.0	17.5
sales	8.9	4.5
service	2.7	1.2
agriculture	6.4	.2
skilled	9.8	2.1
unskilled	12.7	7.2
unemployed	.8	.1
homemaker	--	34.4
student	.2	.5
military	.9	--
retired	9.3	3.3
deceased	4.2	2.8

¹N varies from 1869 to 1931. Data reported for combined group of students/interns.

²Includes M.D., D.D.S.

³Includes Ph.D., Ed.D.

89-93). Tangri (85) found that daughters of less-educated, nonworking mothers were likely to enter traditional occupations, while daughters of more educated, working mothers were likely to develop more masculine interests. Wilson et al. (71) found that both parents of nontraditional women were better educated than were the parents of women in traditional areas.

The employment status and pattern of the respondents' mothers are shown in Table 20. More than half of the students/interns indicated their mothers were employed either full- or part-time, and only a small percentage of the students/interns' mothers had never worked outside the home. A number of studies indicate that working mothers--women who serve as role models successfully combining family and career and expressing satisfaction with their lifestyle--have daughters who are similarly oriented (87).

Table 20. Mothers' employment status and pattern of dietetic students/interns¹

mothers' employment status/pattern	N	%
employment status		
currently employed full-time	713	38.1
currently employed part-time	387	20.7
not employed outside home	770	41.2
employment pattern		
almost always worked outside home	370	19.1
started work after children were in school	627	32.4
quit work and never returned after children were born	297	15.4
has worked off and on	358	18.5
has never worked outside home	208	10.7
other	76	3.9

¹Data based on combined group of students/interns.

In Table 21, the family members of students/interns in a health-related profession are reported. Of the total group (N = 1952), about 10% of the respondents had a relative who was a dietitian and more than 60% had a relative in another health profession. About 15% of the respondents' mothers were in a health profession, almost two-thirds of whom were nurses. Of the 6.6% of the fathers in a health profession, almost half were physicians. Nursing and medicine were the most frequently reported professions.

Experiences Influencing Career Choice

Data in Table 22 indicate that the majority of respondents have had previous work experience related to the dietetic profession. About half of the CUP students and almost 70% of the interns had worked as an aide or volunteer in a healthcare setting; more than 60% of the CUP students and almost 80% of the interns had worked in a foodservice operation. More interns than CUP students reported having had experience related to their future career plans. Both groups, however, perceived this work experience as being of some importance or very important in their decision to select dietetics.

O'Donnell and Anderson (93) found that women in both traditional and nontraditional fields in their sample of female undergraduate students had considerable work experience in a variety of jobs. A high percentage of women in both groups had some work experience related to their major, but the nontraditionals or pioneers had more experience related to their future career plans, a finding consistent with previous studies (83, 190).

Other experiences of the students and interns and their degree of influence on career choice also are reported in Table 22. The majority received information on the opportunities in dietetics from a knowledgeable

Table 21. Family members of dietetic students/interns in a health-related profession

type of family member	family member in health profession ¹	type of health profession					allied health ²	other ³
		N	%	dietetics	medicine	dentistry	nursing	
mother	296	15.2	15.5	1.0	.7	64.2	9.1	9.5
father	129	6.6	1.5	49.6	20.9	.8	3.9	23.3
brother/sister	479	24.5	3.3	15.7	4.4	40.7	19.8	16.1
spouse	34	1.7	--	38.2	--	11.8	17.6	32.4
aunt/uncle cousin	1141	58.4	9.9	23.7	3.4	47.2	6.8	9.0
relative by marriage	145	7.4	9.7	28.3	4.1	38.6	9.0	10.3
grandparent/other relative	83	4.2	12.1	34.9	2.4	42.2	--	8.4

¹Number and % of total group (N = 1952) with family member in a health profession.

²Includes physical therapist, medical technologist, occupational therapist, X-ray technician, and other technicians and therapists.

³Includes pharmacist, physiologist, psychologist, veterinarian, and chiropractor.

⁴Of the total number of each type of relative in a health profession, data indicates % in each type of profession.

Table 22. Experiences influencing decision to select dietetics as a career

experience	group ¹	% reporting experience	degree of influence ²		
			not important	some importance	very important
		%	←	→	→
Worked as an aide or volunteer in a healthcare setting	CUP intern	48.8 68.1	14.0 14.4	45.7 42.1	40.3 43.5
A family member or friend received dietetic services	CUP intern	26.8 24.1	26.0 21.6	47.8 49.2	26.2 29.2
Self (as patient) received dietetic services	CUP intern	11.1 10.5	27.3 20.0	23.0 35.3	49.7 44.7
Read books, magazines, or newspaper articles related to dietetics and nutrition	CUP intern	89.5 92.1	2.2 4.1	46.7 44.4	51.1 51.5
Attended a career day in high school or college	CUP intern	26.3 25.6	30.2 34.0	42.1 42.1	27.7 23.9
Received information on the opportunities in dietetics from a knowledgeable person	CUP intern	70.7 66.0	3.0 2.0	33.1 40.4	63.9 57.6
Worked in foodservice operation	CUP intern	61.2 78.3	25.4 22.4	35.7 38.5	38.9 39.1
Have talent or interest in cooking and food preparation	CUP intern	84.5 84.8	10.9 13.6	44.6 42.4	44.5 44.0
Enjoyed and/or excelled in science courses in high school	CUP intern	72.3 77.9	12.1 7.9	46.4 39.0	41.5 53.1

¹CUP--N varies from 1157 to 1161; intern--N varies from 769 to 775.²Respondents rated degree of influence if they reported having the experience.

person--presumably a dietetic professional during career-related work experience--and rated this experience as very important in their decision to major in dietetics. Almost all the respondents had read books, magazines, or newspaper articles related to dietetics and nutrition, which was considered very important in selecting dietetics as a career. Having a talent or interest in cooking and food preparation and enjoying or excelling in high school science courses were additional strong influences for many of the respondents. Although most students/interns had not received dietetic services personally, for those who reported having had this experience, it was an important influence. A career day in high school or college was the experience receiving the lowest rating as a degree of influence to select dietetics for both students and interns.

The analysis of the selected variables on the ratings of the above experiences are summarized in Table 23. The only significant difference found between the ratings of CUP students vs. interns was the impact of high school science courses; interns placed more importance on the experience of enjoying and/or excelling in science than did the students. In examining respondents with low vs. high professional identification (refer to Table 18 for explanatory footnotes), students/interns with higher professional identification were more influenced by dietetics-related work experience, dietitians who provided care to a family member/friend, nutrition- or dietetic-related materials, a knowledgeable person, and a talent/interest in cooking and food. Students/interns with a higher home economics orientation (refer to Table 18 for explanatory footnotes) were significantly more influenced than were low home economics-oriented respondents by their talent or interest in cooking and food, which is

Table 23. Effects of selected variables on ratings of experiences influencing decision to select dietetics as a career

experience	N ²	group		professional identification		home economics orientation	
		CUP	intern	low	high	low	high
				least square means ³ and std. error			
Worked as an aide or volunteer in a healthcare setting.	1098	2.26 ±.03	2.30 ±.03	2.20 ±.03	2.36 ±.03	2.26 ±.03	2.30 ±.03
A family member or friend received dietetic services	530	1.98 ±.04	2.09 ±.05	1.93 ±.05	2.14 ±.04	2.04 ±.05	2.03 ±.04
Self (as patient) received dietetic services	244	2.21 ±.07	2.26 ±.09	2.15 ±.08	2.32 ±.08	2.24 ±.08	2.23 ±.07
Read books, magazines, or newspaper articles related to dietetics and nutrition.	1776	2.49 ±.02	2.48 ±.02	2.44 ±.02	2.53 ±.02	2.49 ±.02	2.47 ±.02

¹Refer to Table 18 for other explanatory footnotes.

²Only those students/interns who reported having had each experience supplied ratings of the degree of influence of the experience.

³Scale = 1, not important to 3, very important.

Means significantly different,
*** $p \leq .001$

Table 23. (cont.)

experience	N	group		professional identification		home economics orientation	
		CUP	intern	low	high	low	high
		least square means and std. error					
Attended a career day in high school or college.	523	1.96 ±.04	1.90 ±.05	1.90 ±.05	1.97 ±.05	1.89 ±.05	1.97 ±.04
Received information on the opportunities in dietetics from a knowledgeable person.	1352	2.60 ±.02	2.56 ±.02	2.50 ±.02	2.66 ±.02	2.56 ±.02	2.61 ±.02
Worked in a foodservice operation.	1340	2.12 ±.03	2.19 ±.03	2.04 ±.03	2.27 ±.03	2.13 ±.03	2.18 ±.03
Have talent or interest in cooking and food preparation.	1667	2.33 ±.02	2.30 ±.03	2.26 ±.02	2.38 ±.02	2.23 ±.02	2.40 ±.02
Enjoyed and/or excelled in science courses in high school.	1484	2.29 ±.02	2.45 ±.03	2.35 ±.02	2.39 ±.02	2.34 ±.02	2.40 ±.02

consistent with their more extensive background in home economics courses and related activities, such as 4-H and FHA.

Considerations Influencing Career Choice

The most important consideration influencing the decision to major in dietetics for the majority of respondents was the program's appeal as an outlet for their interests and the things they liked to do (Table 24). Less than 1% of the CUP students and 2% of the interns did not consider this issue when selecting dietetics. Also, most of both groups considered the intellectual challenge of the dietetic program to be of some importance or very important when selecting dietetics as their college major. Similarly, Stone et al. (8) found that the most significant influence on the career choice for the young dietitians surveyed was the individual's abilities and interests. Data reported by Nippo (9) and the Restaurants & Institutions' 1984 JOBS Survey (63) indicated that an interest in nutrition was one of the most important influences affecting the choice of dietetics as a career.

Another very important factor for the CUP students and interns was the consideration that the potential job opportunities in the field seemed compatible with their future personal plans (Table 24). Two-thirds of the students and almost three-fourths of the interns were not influenced by the female-dominated aspect of dietetics and did not consider the "sex-role appropriateness" of the field when making their decision to select dietetics. One respondent wrote the following comment, which was typical of several statements concerning this issue:

I considered this a disadvantage in making my decision, i.e., following a "conventional" career choice for women was viewed as a negative factor.

Table 24. Considerations influencing decision to select dietetics as a college major

consideration	group	degree of importance			χ^2
		did not consider	of some importance	very important	
		$\longleftrightarrow$ ————— % ————— $\rightarrow$			
The dietetic program would be intellectually challenging for me.	CUP ¹ intern ²	8.1	41.1	50.8	11.63**
		6.7	34.7	58.6	
The major would provide an outlet for my interests and the things I like to do.	CUP intern	.9	15.3	83.8	4.30
		1.8	17.2	81.0	
The potential job opportunities in the field seem compatible with my future personal plans.	CUP intern	4.3	29.4	66.3	13.26**
		6.9	33.5	59.6	
Dietetics is accepted in our society as an appropriate career opportunity for women.	CUP intern	67.2	25.0	7.8	10.41**
		73.8	20.8	5.4	
It is possible to combine family roles with a career in dietetics.	CUP intern	24.6	35.1	40.3	14.51**
		29.9	37.5	32.6	

¹N varies from 1168 to 1172.²N varies from 773 to 777.** $P \leq .01$

A surprising number of respondents in both groups, however, did consider this factor to be of some importance when making their career choice, which implies that at least some dietetic majors may have ruled out certain careers or opportunities because of sex-role stereotypes. Some evidence exists in the literature that women with liberal sex-role attitudes are more likely to enter nontraditional curriculums (182) and consequently prepare for sex-atypical jobs and that women with more conservative sex-role beliefs tend to gravitate toward sex-typical curriculums (67, 85) and typically female occupations.

In an investigation of career choice and sex-role concepts of undergraduate students, Strange and Rea (169) found that both male and female students in male- and female-dominated majors assigned the greatest degree of importance to personal interests in making their career choice. Similarly, across all groups, the sex appropriateness of their chosen major was reported to be least important. Neither sex reported much consideration of future marriage plans in making their decision. In this study, however, about three-fourths of both groups rated the potential for combining family roles with a dietetic career as somewhat or very important.

The analysis of the effects of selected variables on the ratings of the above considerations are reported in Table 25. Interns placed significantly greater importance on the intellectual challenge of the dietetic program than did CUP students when making their decision to major in dietetics. CUP students were influenced significantly more than were interns by what has been labeled as "traditional female beliefs." The students placed more importance on combining family roles and other personal plans with dietetics, and considered dietetics as an appropriate

Table 25. Effects of selected variables on ratings of considerations influencing decision to major in dietetics¹

considerations	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	← least square means² and std. error →					
The dietetic program would be intellectually challenging for me.	2.42 ±.02	2.53 ±.02	2.41 ±.02	2.54 ±.02	2.47 ±.02	2.48 ±.02
The major would provide an outlet for my interests and the things I like to do.	2.83 ±.01	2.80 ±.02	2.77 ±.01	2.85 ±.01	2.81 ±.01	2.82 ±.01
The potential job opportunities in the field seem compatible with my future personal plans.	2.62 ±.02	2.53 ±.02	2.52 ±.02	2.63 ±.02	2.53 ±.02	2.62 ±.02
Dietetics is accepted in our society as an appropriate career opportunity for women.	1.40 ±.02	1.32 ±.02	1.35 ±.02	1.37 ±.02	1.31 ±.02	1.41 ±.02
It is possible to combine family roles with a career in dietetics.	2.15 ±.02	2.04 ±.03	2.03 ±.03	2.16 ±.03	2.06 ±.03	2.13 ±.03

¹N varies from 1936 to 1939. Refer to Table 18 for other explanatory footnotes.²Scale = 1, did not consider (when making the decision to major in dietetics); 2, of some importance; 3, very important.

Means significantly different,

** p < .01

*** p < .001

"female career" more often than did interns. Compared to those low in professional identification, respondents categorized as high in professional identification were influenced significantly more by the intellectual challenge of the dietetic program, yet still considered the potential of the field to combine family roles and other future personal plans with dietetics as important. Respondents highly home economics-oriented were influenced significantly more than were respondents low in home economics orientation by the compatibility of the field with their future personal plans, and considered the "sex-role appropriateness" of the field as somewhat more important.

Value Influences on Career Choice

About 90% of both the CUP students and interns rated "interesting work" as quite important in their decision to select dietetics as a career (Table 26). The second most important influence was the "opportunity for service to society" that dietetics offered, with about 60% of both groups rating this factor as quite important. "Social prestige" was perceived to be less important and ranked last in the value influences rated.

Almquist (109) studied college women in male-dominated areas and female-dominated fields, which included dietetics. Both categories of women were oriented strongly toward an occupation that allowed them to combine career and family, were interested moderately in a stable secure future, and virtually were unconcerned about high prestige. Women who chose a male-dominated or nontraditional career were adamant about wanting to use their special abilities and were rather more concerned about achieving a high income than were those who opted for a female-dominated or traditional career. The latter group was more interested in working

Table 26. Value influences on decision to select dietetics as a career

value influence	group	degree of influence			χ^2
		not important	fairly important	quite important	
		← ————— % ————— →			
secure future	CUP ¹ intern ²	9.7 11.5	43.3 52.4	47.0 36.1	22.54***
advancement potential	CUP intern	12.8 15.6	49.2 49.6	38.0 34.8	3.95
good salary	CUP intern	12.7 18.3	54.7 60.0	32.6 21.7	31.22***
interesting work	CUP intern	.5 .4	9.6 9.3	89.9 90.3	.24
social prestige	CUP intern	39.6 43.3	47.9 48.2	12.5 8.5	8.13*
opportunity for service to society	CUP intern	6.0 4.6	33.7 33.6	60.3 61.8	1.77

¹N varies from 1168 to 1172.²N varies from 772 to 778.* $P < .05$ *** $P \leq .001$

with people rather than things, and with having an opportunity to help others. Aadland et al. (11) found that those students choosing foods and nutrition as a college major were most oriented toward attaining a good paying job combined with being able to assist others. Dietetic students in the Nippo (9) study indicated that interest in nutrition and a desire to work with people were the two most significant factors influencing their choice of dietetics as a college major.

After responding to this item on the research instrument, some respondents listed other factors that influenced them to choose dietetics as a career. Many commented on the flexibility of the field and the variety of job opportunities available to a registered dietitian. Several wanted a career that would allow them to be associated with the healthcare field, consistent with their desire to provide "service to society."

Comments made when asked about factors of influence included:

- . . . to obtain the ability to socialize and interact with others on the healthcare team.
- . . . opportunity to keep in touch with scientific advancement.
- . . . associated with medical field and the background to proceed to medical school, if desired, at a future date.
- I didn't just want to graduate from college with a B.S. degree; I wanted to be a "professional" and licensed in a prestigious and health-related profession.

These comments are similar to the findings of Cleveland (61, 62), who investigated the personality patterns of dietetic interns and practitioners. In this 1961 study, the dietetic group was intrigued by the scientific aspects of dietetics. Identification with the medical team ranked high with those dietitians employed in a medical setting.

In Table 27, the mean ratings of the value influences adjusted for the effects of selected variables are shown. An examination of the

Table 27. Effects of selected variables on ratings of value influences on decision to select dietetics as a career¹

value influence	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	← least square means ² and std. error →					
secure future	2.37 ±.02	*** 2.25 ±.02	2.27 ±.02	** 2.35 ±.02	2.26 ±.02	** 2.36 ±.02
advancement potential	2.24 ±.02	2.20 ±.02	2.15 ±.02	*** 2.29 ±.02	2.21 ±.02	2.23 ±.02
good salary	2.20 ±.02	*** 2.04 ±.02	2.09 ±.02	2.14 ±.02	2.07 ±.02	*** 2.17 ±.02
interesting work	2.89 ±.01	2.91 ±.01	2.85 ±.01	*** 2.95 ±.01	2.90 ±.01	2.90 ±.01
social prestige	1.73 ±.02	* 1.65 ±.02	1.68 ±.02	1.70 ±.02	1.65 ±.02	* 1.72 ±.02
opportunity for service to society	2.53 ±.02	2.58 ±.02	2.49 ±.02	*** 2.62 ±.02	2.56 ±.02	2.56 ±.02

¹N varies from 1932 to 1941. Refer to Table 18 for other explanatory footnotes.²Scale = 1, not important to 3, quite important.

Means significantly different,

* P < .05

** P < .01

*** P < .001

differences between the ratings assigned by CUP students vs. interns indicates that the students placed significantly more importance on a secure future, good salary, and social prestige, although prestige was not an important influence for either group. Students/interns high in professional identification were more concerned with the advancement potential, interesting work, and opportunity for service to society that dietetics offered than were students/interns categorized as being low in professional identification. Respondents highly home economics-oriented rated secure future, good salary, and social prestige more important than did respondents low in home economics orientation.

Characteristics Important in a Career

Important Career Characteristics

The 32 items selected from Schletzer's (174) Job Dimensions Blank, used to identify important characteristics of a career, were ordered in descending order of perceived importance according to the mean ratings assigned by the respondents (Table 28). Eleven of the characteristics were rated in the "most important category" (mean ≥ 3.44); 16 as "somewhat important" (mean 2.80 to 3.43); and five, "less important" (mean ≤ 2.79). The career importance scale used by the students/interns ranged from 1, of minor or no importance to 4, very important.

Personal satisfaction, feelings of achievement, opportunity to use aptitudes and abilities, and opportunity to improve health of others were rated as the most important aspects of a career; while opportunity for travel, opportunity to direct work of others, prestige in the community, fun and relaxation with colleagues, and opportunity to help in policy-making were less important aspects for the respondents.

Table 28. Important characteristics of a career identified by dietetic students/interns¹

item number	most important aspects (mean $\geq$ 3.44) ²	overall mean ³	group		F value
			CUP	intern	
			mean and std. error		
y.	personal satisfaction	3.83	3.83 $\pm .01$	3.83 $\pm .02$	.00
c.	feeling of achievement	3.70	3.70 $\pm .02$	3.70 $\pm .02$	.14
h.	opportunity to use aptitudes and abilities	3.63	3.61 $\pm .02$	3.65 $\pm .02$	2.06
s.	opportunity to improve health of others	3.56	3.58 $\pm .02$	3.53 $\pm .02$	3.38
bb.	opportunity to use education	3.55	3.55 $\pm .02$	3.54 $\pm .02$	.29
ee.	opportunity to use learned skills	3.51	3.50 $\pm .02$	3.50 $\pm .02$	.22
j.	freedom to use own judgment	3.50	3.48 $\pm .02$	3.55 $\pm .02$	5.61*
g.	chance to improve skills	3.49	3.49 $\pm .02$	3.48 $\pm .02$	.01
i.	opportunity to use initiative	3.48	3.45 $\pm .02$	3.53 $\pm .02$	6.90*
m.	chance to see results of work	3.48	3.50 $\pm .02$	3.45 $\pm .02$	2.24
dd.	intellectual challenge	3.44	3.40 $\pm .02$	3.48 $\pm .02$	6.88*

¹N varies from 1900 to 1910.

²Statements are ordered from most to least important based on means of overall group.

³Importance scale = 1, of minor or no importance; 2, fairly important; 3, quite important; 4, very important.

* $P \leq .05$

Table 28. (cont.)

item number	somewhat important aspects (mean 2.80 to 3.43)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
aa.	feeling of being needed	3.26	3.26 ±.02	3.26 ±.03	.00
p.	intelligent, competent colleagues	3.24	3.24 ±.02	3.24 ±.03	.01
t.	variety of activities required	3.23	3.19 ±.02	3.28 ±.03	5.60*
u.	opportunity to help others find success or happiness	3.17	3.20 ±.02	3.12 ±.03	4.30*
ff.	chance to evaluate own work	3.14	3.16 ±.02	3.09 ±.03	3.76*
cc.	financial security	3.12	3.15 ±.02	3.08 ±.03	3.25
a.	opportunity to improve comfort or appearance of others	3.11	3.13 ±.03	3.09 ±.03	.75
e.	opportunities for promotion	3.09	3.10 ±.03	3.07 ±.03	.59
z.	opportunity to do socially significant tasks	3.00	3.03 ±.03	2.97 ±.03	1.58
d.	opportunity to be your own boss	2.99	2.96 ±.03	3.03 ±.03	2.35
f.	earnings	2.95	2.98 ±.03	2.91 ±.03	3.32
w.	interesting colleagues	2.93	2.90 ±.02	2.99 ±.03	5.05*
o.	prospects for future earnings	2.91	2.94 ±.03	2.86 ±.03	3.66
l.	prestige in your profession	2.90	2.92 ±.03	2.87 ±.03	1.23

Table 28. (cont.)

item number	somewhat important aspects (mean 2.80 to 3.43)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
k.	your prestige on the job	2.81	2.82 ±.03	2.80 ±.03	.31
n.	recognition from colleagues	2.80	2.80 ±.03	2.80 ±.03	.00

item number	less important aspects (mean ≤ 2.79)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
q.	opportunity to help in policy-making	2.57	2.58 ±.03	2.56 ±.03	.23
v.	fun and relaxation with colleagues	2.55	2.51 ±.03	2.61 ±.04	4.89*
x.	your prestige in the community	2.36	2.40 ±.03	2.31 ±.03	4.00*
b.	opportunity to direct work of others	2.28	2.27 ±.03	2.28 ±.03	.08
r.	opportunity for travel	2.16	2.20 ±.03	2.10 ±.04	4.22*

Stone et al. (8, 167) reported that young dietitians in their sample found personal satisfaction, feelings of achievement, and opportunity to use aptitudes and abilities as the most important characteristics of a career--the same top three characteristics identified by students/interns in the present study. Opportunities for travel and prestige in the community were the least important career characteristics identified by the dietitians in the Stone et al. investigation, which also were identified by students and interns as being less important aspects of a career. The respondents in the present study, however, tended to rate the 32 items as slightly more important overall than did the dietetic professionals in an early career stage studied by Stone et al. For example, the lowest mean rating assigned by the dietitians was 1.80 (for opportunities for travel), while that same characteristic, also the lowest indicated by students and interns, was 2.16. Similarly, personal satisfaction, the most important characteristic identified by both groups, was assigned a 3.78 by the dietitians, yet the students/interns rated it as 3.83.

In examining the differences between CUP students vs. interns, interns placed somewhat more importance ($P \leq .05$) than did CUP students on freedom to use own judgment, opportunity to use initiative, intellectual challenge, and variety of activities required. CUP students, however, rated opportunity to help others find success or happiness and chance to evaluate own work as significantly more important ($P \leq .05$) in a career than did interns.

Career Importance Scores

As described in the data analysis section, principal component analysis was used by Stone et al. (8, 167) to determine if the importance items could be conceptualized meaningfully by a smaller number of components

that could account for their interrelationships. After rotating the factor matrix according to the varimax criterion, seven components were identified by Stone et al.:

I. Prestige (four items).

This factor focuses on the importance of status in relation to the job, profession, and colleagues.

II. Monetary Reward (three items).

This cluster portrays the importance of the financial rewards and security aspects of the career.

III. Independence/Self-sufficiency (seven items).

The importance of autonomy, opportunities to use initiative, to influence decisions, and the freedom to use judgment and evaluate own work were key issues reflected in this group of items.

IV. Professional Challenge (four items).

This factor deals with the importance of being a trained professional and of using professional skills and capacities to the fullest.

V. Self-realization (seven items).

Factor V portrays the importance of achieving intrinsic satisfaction from one's work, having opportunities to improve oneself, and attaining professional goals.

VI. Social Service (five items).

Service to society, opportunities to help others, and feelings of being needed are emphasized in this factor.

VII. Social Stimulation (three items).

Interaction with colleagues, both professional and social, is accounted for by items comprising Factor VII.

Data on factor loadings and reliability of the scores were shown in Table 3 in the methods section. Reliability coefficients were considered to be sufficiently high for analysis among groups (coefficient alpha $\geq$.68). Factor scores were computed as summations of the scores for items

loading significantly on a factor. These scores were used for analyzing dimensions of career importance, or career motivation, in this study.

The intercorrelations among the career importance factor scores are listed in Table 29. Factors III and V, Independence/Self-sufficiency and Self-realization, were highly correlated ($r, .71$), indicating that autonomy and achievement of intrinsic satisfaction in a career are equally important. These two factor scores also were the most highly correlated career importance scores in the Stone et al. (8, 167) study. Professional challenge, independence, and attainment of professional goals also were strongly related aspects of importance in a career, as reflected by the high correlations between Factors III, IV, and V. Social Service, Factor VI, and Monetary Reward, Factor II, were the least correlated scores ($r, .14$), indicating that the factors were somewhat independent of each other; or in other words, those respondents valuing service to society as important in a career placed less importance on receiving financial rewards. Prestige (Factor I) and Monetary Reward (Factor II) were fairly strongly correlated ($r, .53$), which may suggest that those who placed importance on prestige also valued the salary and benefits offered by a career.

The seven career importance factor scores also were computed as an average of the item ratings for those items comprising each score, to permit a comparison of the relative importance of the factor scores. The scale ranged from 1, of minor or no importance to 4, very important. The resulting mean importance factor scores are shown below, in descending order of perceived importance:

Table 29. Correlation¹ of career importance factor scores

score ²	overall mean and std. dev.	I	II	III	IV	V	VI
I. Prestige	10.87 ± 3.02						
II. Monetary reward	8.98 ± 2.30	.53					
III. Independence/self-sufficiency	20.93 ± 3.73	.50	.49				
IV. Professional challenge	13.62 ± 2.13	.36	.31	.63			
V. Self-realization	25.11 ± 2.89	.40	.36	.71	.68		
VI. Social service	16.11 ± 2.88	.27	.14	.32	.41	.41	
VII. Social stimulation	8.73 ± 2.06	.48	.37	.50	.46	.44	.39

¹N varies from 1909 to 1912. All correlation coefficients significant at $P \leq .001$.

²Scores derived from principal component analysis of ratings of the importance of various characteristics of a career. Refer to Table 2 for computation of scores.

<u>career importance factor scores</u>	<u>mean rating</u>
V. Self-realization	3.59
IV. Professional Challenge	3.40
VI. Social Service	3.22
II. Monetary Reward	2.99
III. Independence/Self-sufficiency	2.99
VII. Social Stimulation	2.91
I. Prestige	2.71

As shown, students/interns rated Self-realization, or the achievement of intrinsic satisfaction from one's work, as the most important aspect of a career, followed by Professional Challenge and Social Service; Prestige was considered the least important.

Young dietitians in the Stone et al. (8, 167) study also rated Self-realization and Professional Challenge as the most important career characteristics, however, Monetary Reward was the third most important aspect rated, while Social Service was fifth. Prestige was slightly more important to the dietetic practitioners in the Stone et al. study than to the students/interns in the present study. Prestige was rated sixth by the dietitians and Social Stimulation was rated last.

In Table 30, the analysis of the effects of selected variables on the career importance factor scores are shown. The only significant difference found between CUP students vs. interns was concerned with Social Stimulation, or the interaction with colleagues. Interns placed more importance on this aspect than was true for CUP students. Respondents categorized as higher in professional identification rated all but one of the factor scores as significantly more important than did those lower in professional identification. The monetary reward score (Factor II) did not differ between these groups. Respondents high in home economics orientation placed significantly more importance on Social Service, than did those with lower home economics orientation.

Table 30. Effects of selected variables on career importance factor scores¹

career importance factor score ²	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	least square means and std. error					
I. Prestige	10.90 ±.09	10.82 ±.11	10.61 *** ±.10	11.11 ±.10	10.83 ±.10	10.89 ±.10
II. Monetary reward	9.06 ±.07	8.85 ±.08	8.92 ±.07	8.99 ±.08	8.88 ±.07	9.03 ±.08
III. Independence/self-sufficiency	20.90 ±.11	20.97 ±.14	20.70 ** ±.12	21.16 ±.12	20.98 ±.12	20.89 ±.12
IV. Professional challenge	13.58 ±.06	13.68 ±.08	13.32 *** ±.07	13.94 ±.07	13.63 ±.07	13.63 ±.07
V. Self-realization	25.01 ±.08	25.27 ±.10	24.72 *** ±.09	25.56 ±.10	25.17 ±.09	25.10 ±.09
VI. Social service	16.15 ±.08	16.05 ±.10	15.56 *** ±.09	16.64 ±.09	15.97 ±.09	16.22 ±.09
VII. Social stimulation	8.63 ±.06	* 8.86 ±.07	8.61 ** ±.07	8.89 ±.07	8.73 ±.07	8.76 ±.07

¹N varies from 1904 to 1907. Refer to Table 18 for other explanatory footnotes.

²Scores derived from principal component analysis of ratings of the importance of various characteristics of a career. Refer to Table 2 for computation of scores.

Means significantly different,

* $p < .05$

** $p < .01$

*** $p < .001$

Potential Sources of Career Satisfaction

Sources of Potential Satisfaction

The same 32 items from Schletzer's (174) Job Dimensions Blank, which were used to identify characteristics important in a career, also were used to identify the potential sources of satisfaction offered by the dietetic profession. Table 31 details the potential sources of satisfaction, ranked from most to least satisfying, that were rated by the respondents. Of the 32 items, 12 were rated as "most satisfying" (mean ≥ 3.83); 12 as "somewhat satisfying" (mean 3.33 to 3.82); and eight, "least satisfying" (mean ≤ 3.32). The students/interns used a five-point scale with anchors of 1, very dissatisfied to 5, very satisfied to rate the characteristics in terms of potential satisfaction in dietetics. The items with the highest overall means, indicating the aspects with the greatest potential for satisfaction in a dietetics career, were opportunity to use learned skills, opportunity to improve health of others, opportunity to use education, chance to improve skills, opportunity to use aptitudes and abilities, and intellectual challenge. The aspects in dietetics perceived by the respondents as potentially least satisfying were concerned with prestige, salary, and the opportunity to travel and to help in policy-making.

Several significant differences were found between the perceived satisfaction of CUP students vs. interns. CUP students saw themselves as being more satisfied than did interns in many of the aspects of a career in dietetics, including the opportunity to use learned skills, opportunity to improve health of others, opportunity to use education, and personal satisfaction.

Table 31. Potential sources of career satisfaction in the dietetic profession identified by dietetic students/interns¹

item number	most satisfying aspects (mean $\geq$ 3.83) ²	overall mean ³	group		F value
			CUP	intern	
			mean and std. error		
n.	opportunity to use learned skills	4.16	4.19 $\pm$.02	4.11 $\pm$.03	6.91*
bb.	opportunity to improve health of others	4.15	4.21 $\pm$.02	4.05 $\pm$.02	24.49*
m.	opportunity to use education	4.13	4.15 $\pm$.02	4.08 $\pm$.03	4.07*
c.	chance to improve skills	4.08	4.08 $\pm$.02	4.08 $\pm$.02	.00
cc.	opportunity to use aptitudes and abilities	4.08	4.10 $\pm$.02	4.06 $\pm$.03	1.24
j.	intellectual challenge	4.07	4.07 $\pm$.02	4.08 $\pm$.03	.09
x.	personal satisfaction	4.01	4.09 $\pm$.02	3.89 $\pm$.03	29.61*
u.	feeling of achievement	3.99	4.07 $\pm$.02	3.87 $\pm$.03	27.38*
t.	opportunity to improve comfort or appearance of others	3.96	4.03 $\pm$.02	3.87 $\pm$.03	20.62*
ff.	intelligent, competent colleagues	3.90	3.88 $\pm$.02	3.92 $\pm$.03	1.23

¹N varies from 1867 to 1885.

²Statements are ordered from most to least satisfying based on means of overall group.

³Potential satisfaction scale = 1, very dissatisfied with career prospects in dietetics; 2, dissatisfied; 3, unsure or undecided; 4, satisfied; 5, very satisfied.

* $P \leq .05$

Table 31. (cont.)

item number	most satisfying aspects (mean $\geq$ 3.83)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
y.	interesting colleagues	3.86	3.84 $\pm .02$	3.88 $\pm .03$	1.93
h.	opportunity to use initiative	3.83	3.85 $\pm .03$	3.79 $\pm .03$	1.91

item number	somewhat satisfying aspects (mean 3.33 to 3.82)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
ee.	opportunity to help others find success or happiness	3.78	3.86 $\pm .02$	3.66 $\pm .03$	27.20*
q.	variety of activities required	3.78	3.83 $\pm .02$	3.70 $\pm .03$	10.76*
f.	chance to evaluate own work	3.77	3.82 $\pm .02$	3.68 $\pm .03$	17.61*
o.	chance to see results of work	3.73	3.81 $\pm .03$	3.61 $\pm .03$	20.01*
e.	feeling of being needed	3.72	3.77 $\pm .03$	3.65 $\pm .03$	8.07*
s.	opportunity to do socially significant tasks	3.70	3.74 $\pm .02$	3.64 $\pm .03$	6.95*
a.	freedom to use own judgment	3.57	3.59 $\pm .03$	3.55 $\pm .03$	.88
g.	opportunity to direct work of others	3.56	3.55 $\pm .02$	3.57 $\pm .03$	.21
k.	opportunity to be your own boss	3.55	3.56 $\pm .03$	3.54 $\pm .03$	.35

Table 31. (cont.)

item number	somewhat satisfying aspects (mean 3.33 to 3.82)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
d.	fun and relaxation with colleagues	3.53	3.52 ±.02	3.55 ±.03	.70
z.	opportunities for promotion	3.46	3.54 ±.03	3.32 ±.03	29.16*
dd.	recognition from colleagues	3.45	3.48 ±.02	3.42 ±.03	2.34
item number	least satisfying aspects (mean ≤ 3.32)	overall mean	group		F value
			CUP	intern	
			mean and std. error		
b.	prestige in your profession	3.32	3.40 ±.03	3.21 ±.03	16.60*
aa.	prospects for future earnings	3.29	3.40 ±.03	3.14 ±.03	32.65*
i.	financial security	3.28	3.43 ±.03	3.06 ±.04	66.84*
r.	opportunity to help in policy-making	3.27	3.30 ±.02	3.24 ±.03	2.51
v.	your prestige in the community	3.26	3.33 ±.03	3.16 ±.03	17.81*
p.	your prestige on the job	3.19	3.30 ±.03	3.03 ±.03	34.52*
l.	opportunities for travel	3.19	3.25 ±.02	3.11 ±.03	13.02*
w.	earnings	3.15	3.32 ±.03	2.91 ±.04	75.89*

Potential Career Satisfaction Scores

Principal component analysis also was used by Stone et al. (8, 167) to determine if the potential career satisfaction items could be analyzed by fewer components. Six components were identified:

I. Professional Challenge (12 items).

A feeling of satisfaction, opportunities to use intellectual capabilities, and professional autonomy were emphasized in this factor.

II. Service to Others (six items).

Altruistic feelings are expressed by items comprising Factor II.

III. Financial (four items).

Satisfaction with monetary rewards, financial security, and promotional opportunities are accounted for by items grouped together in this factor.

IV. Professional Power (five items).

Satisfaction in the opportunity to direct oneself and others and to influence organizational decisions is the focus of this factor.

V. Prestige (four items).

The status on the job, among colleagues, and in the community were aspects of items clustered in this factor.

VI. Professional Stimulation (four items).

Satisfaction with professional and social interaction with colleagues is the key aspect of Factor VI.

Factor loading and reliability of coefficients were shown in Table 4. Coefficient alpha for the six scores ranged from .72 to .91, which was considered sufficiently high for analyzing group data. As with the importance components, potential career satisfaction scores were computed as summations of item scores. These scores were used for analyzing dietetic students/interns' perceptions of potential sources of career satisfaction in dietetics. Also, an overall potential career satisfaction score was

computed from the responses to all 32 items in Part VII of the research instrument. In Table 2, the computation of scores is outlined.

The potential career satisfaction factor scores first were intercorrelated and are presented in Table 32. Coefficients between Professional Challenge and Service to Others and between Professional Challenge and Professional Power were quite high (r , .75 and .68, respectively), indicating that those who believed they would be satisfied with challenges in the profession also perceived themselves as being satisfied with opportunities for service to society and with the degree of autonomy provided by careers in the dietetic profession. These factors also were the most highly correlated scores in the Stone et al. (8, 167) study of dietitians in the early establishment stages of their careers.

Potential satisfaction with career prestige (Factor V) also was highly related to Professional Challenge (r , .65) and Financial (r , .62), indicating that those who saw themselves as being in a prestigious position as a dietetic professional also believed they would be satisfied financially with their career and would be satisfied with the intellectual challenge and professional autonomy offered by their work. All of the factor scores were highly correlated with the overall potential career satisfaction score (r , $\geq$.63). The strongest relationship was between overall satisfaction and Professional Challenge. Those respondents who saw themselves as potentially finding the most satisfaction from being challenged intellectually held the most positive perceptions overall with sources of satisfaction in their career in dietetics.

The correlations of career importance and potential career satisfaction factor scores are shown in Table 33. Correlation coefficients were somewhat low ($r \leq$.36), indicating that importance and satisfaction

Table 32. Correlation¹ of potential career satisfaction factor scores

score ²	overall mean and std. dev.	I	II	III	IV	V	VI
I. Professional challenge	46.94 ± 6.38						
II. Service to others	23.28 ± 3.50	.75					
III. Financial	13.19 ± 3.29	.54	.44				
IV. Professional power	17.34 ± 2.62	.68	.53	.49			
V. Prestige	13.21 ± 2.92	.65	.58	.62	.56		
VI. Professional stimulation	14.73 ± 2.20	.55	.51	.39	.47	.60	
Overall potential career satisfaction ³	154.52 ± 33.63	.84	.74	.72	.73	.80	.63

¹N varies from 1882 to 1890. All correlation coefficients significant at $P \leq .001$.

²Scores derived from principal component analysis of ratings of potential sources of career satisfaction.

³Index of overall satisfaction, derived from responses to 32 items. Refer to Table 2 for computation of scores.

Table 33. Correlation¹ of career importance and potential career satisfaction factor scores

career importance factor score ²	potential satisfaction factor score ³						Overall potential career satisfac- tion
	I. Profes- sional challenge	II. Service to others	III. Finan- cial	IV. Profes- sional power	V. Prestige	VI. Profes- sional stimu- lation	
I. Prestige	.02	.02	.04	.08	.16	.15	.03
II. Monetary reward	.00	-.02	.07	.05	.09	.07	.01
III. Independence/ self-sufficiency	.10	.04	.03	.17	.08	.14	.02
IV. Professional challenge	.20	.15	.06	.16	.10	.19	.09
V. Self- realization	.18	.13	.02	.12	.05	.15	.05
VI. Social service	.20	.36	.10	.14	.13	.19	.17
VII. Social stimulation	.08	.11	.03	.11	.12	.30	.07

¹N varies from 1882 to 1888.

r .05, $P < .05$

r .08, $P \leq .01$

²Scores derived from principal component analysis of ratings of the importance of various characteristics of a career. Refer to Table 2 for computation of scores.

³Scores derived from principal component analysis of ratings of potential sources of career satisfaction. Refer to Table 2 for computation of scores.

components were independent dimensions in the evaluation of careers in dietetics. Of all the relationships studied, the strongest was between the importance factor score VI, Social Service, and the potential satisfaction score II, Service to Others ($r, .36$), which indicates that for the respondents who valued a career in which they could help people, saw dietetics as an opportunity to fulfill this objective. A positive correlation also was found between these two service-oriented factors in the Stone et al. (8, 167) study. The dietitians in their sample valued service to others in a career and also were finding sources of satisfaction from serving others in the practice of dietetics.

Stone et al. (8, 167) also found that the strongest correlations between the importance and satisfaction scores were on those dimensions that were similar, e.g., the professional challenge importance score and the professional challenge satisfaction score. A similar pattern emerged from this study. With few exceptions, the highest correlations were between similar aspects of importance (I) and potential sources of satisfaction (PS): Professional Challenge (I. IV and PS. I); Social Service (I. VI) and Service to Others (PS. II); Independence/Self-sufficiency (I. III) and Professional Power (PS. IV); Prestige (I. I and PS. V); and Social Stimulation (I. VII) and Professional Stimulation (PS. VI). The notable exception was the correlation between the Monetary Reward importance score and the potential satisfaction Financial score. The correlation between these scores was only .07, indicating that those who placed importance on monetary reward in a career tended to perceive limited satisfaction for the potential for financial reward from a dietetic career. Interestingly, those who valued social service as

important in a career were the most satisfied with their future plans as a dietitian (overall potential career satisfaction) ($r, .17$).

The six potential career satisfaction factor scores were computed as an average of the item ratings for those items comprising each score, to permit a comparison of the relative perceived satisfaction of the factor scores. The procedure was similar to the computation of the importance scores, however, the potential satisfaction items were rated on a five-point scale ranging from 1, very dissatisfied to 5, very satisfied. The resulting potential satisfaction factor scores are shown below, in descending order of perceived satisfaction:

<u>potential career satisfaction factor scores</u>	<u>mean rating</u>
I. Professional Challenge	3.91
II. Service to Others	3.88
VI. Professional Stimulation	3.68
IV. Professional Power	3.47
V. Prestige	3.31
III. Financial	3.30

As shown, the students and interns saw Professional Challenge, or the opportunity to use intellectual capabilities, as the aspect most promising to be a source of satisfaction in dietetics, followed by Service to Others and Professional Stimulation. The aspects perceived to be least satisfying in their future careers as a dietitian were concerned with prestige and salary. This ranking was identical to that of the career satisfaction factor scores in the Stone et al. (8, 167) study, indicating that those aspects perceived to be satisfying, or dissatisfying, by dietetic students and interns, were the same aspects found to be satisfying, or dissatisfying, by dietetic practitioners.

In Table 34, the effects of selected variables on the sources of satisfaction in potential career satisfaction scores are presented. CUP

Table 34. Effects of selected variables on ratings of potential satisfaction in dietetics¹

potential career satisfaction factor score ²	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	← least square means and std. error →					
I. Professional challenge	47.20 ±.18	* 46.58 ±.23	45.36 ±.20	*** 48.42 ±.21	46.60 ±.20	* 47.18 ±.20
II. Service to others	23.57 ±.10	*** 22.86 ±.12	22.36 ±.11	*** 24.07 ±.11	23.01 ±.11	** 23.42 ±.11
III. Financial	13.67 ±.10	*** 12.48 ±.12	12.67 ±.10	*** 13.48 ±.11	12.78 ±.10	*** 13.38 ±.11
IV. Professional power	17.45 ±.08	* 17.18 ±.10	17.01 ±.09	*** 17.61 ±.09	17.19 ±.09	* 17.43 ±.09
V. Prestige	13.44 ±.09	*** 12.88 ±.10	12.74 ±.09	*** 13.58 ±.10	12.91 ±.09	*** 13.41 ±.09

¹N varies from 1877 to 1887. Refer to Table 18 for other explanatory footnotes.

²Scores derived from principal component analysis of ratings of potential sources of career satisfaction. Refer to Table 2 for computation of scores.

Means significantly different,

* $P \leq .05$

** $P \leq .01$

*** $P \leq .001$

Table 34. (cont.)

potential career satisfaction factor score	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	← least square means and std. error →					
VI. Professional stimulation	14.68 ±.07	14.81 ±.08	14.41 ±.07	*** 15.08 ±.07	14.70 ±.07	14.79 ±.07
Overall potential career satisfaction ³	157.57 ±.97	*** 150.09 ±1.19	147.05 ±1.06	*** 160.61 ±1.09	151.25 ±1.07	*** 156.41 ±1.08

³Index of overall satisfaction, derived from responses to 32 items. Refer to Table 2 for computation of scores.

students perceived themselves as being significantly more satisfied in their future careers than did interns on all dimensions except Professional Stimulation (Factor VI). Also, the CUP students saw themselves as being more satisfied overall with the potential in dietetics than did interns. Respondents high in professional identification rated all of the factor scores and overall score significantly higher than did those low in professional identification, indicating that those who identify strongly with the dietetic profession saw more sources of satisfaction in the field. Similarly, respondents high in home economics orientation were more positive about their future careers in dietetics, as they rated all but one of the potential satisfaction scores significantly higher than did those low in home economics orientation. Only the Professional Stimulation scores did not differ between the groups.

Professional and Career Involvement and Identification

Professional Involvement

Using measures originally adapted by Stone et al. (8, 167) from Hadd (171), the degree of professional involvement of the students/interns was assessed. These measures were concerned with number of professional memberships and attendance at professional meetings. More than 80% of both students and interns were members of The American Dietetic Association (Table 35). Interns, however, were somewhat more involved in other professional organizations than were the CUP students. Interns also attended professional meetings more often than did CUP students. Interns may have been more involved professionally than were CUP students (especially juniors) because interns are somewhat older and closer to becoming dietetic practitioners, and may have more opportunities to interact with

Table 35. Responses of dietetic students/interns on professional involvement items

item	group		χ^2
	CUP ¹	intern ²	
	%	%	
professional memberships			
American Dietetic Association	82.9	84.5	.82
American Home Economics Association	11.3	19.1	24.05***
Society for Nutrition Education	1.6	5.2	18.84***
attendance at district or local dietetic meetings			
regularly	11.3	31.4	
usually, but miss on occasion	21.6	29.7	
not very often	28.7	24.2	
have not attended	38.4	14.7	203.07***
number of state dietetic meetings attended			
none	56.4	42.4	
one	28.9	31.4	
two	9.3	16.0	
three or more	5.4	10.2	55.29***
number of national dietetic meetings attended			
none	87.2	84.9	
one or more	12.8	15.1	4.27
attended state or national meetings of allied associations	6.9	14.1	29.44***

¹N varies from 1097 to 1154.

²N varies from 740 to 773.

*** $P \leq .001$

dietitians and other healthcare professionals. Thus, interns may identify more with other dietitians and their activities and not consider themselves as students. Both groups, however, did seem to be somewhat concerned about becoming involved in the profession, as a sizeable number had attended dietetic meetings at the district and state level, and about 14% of the combined group of students/interns had attended one or more national dietetic meetings.

Career Involvement

Career involvement was measured using a scale adapted from Gould (172). Distribution of responses to items comprising the career involvement scale are listed in Table 36. Evidence of high levels of pride and identification with the dietetic profession was shown by responses to the five statements. More than 90% of the respondents agreed or strongly agreed with both of the following statements:

I identify strongly with my profession.

My chosen profession gives me a sense of pride.

Between 60 and 90% agreed or strongly agreed with the three remaining statements:

Compared to other areas of my life, my chosen profession is very important to me.

If I were to describe myself to someone, I would probably begin by stating my chosen profession.

If I were to rank in importance to me all the things that I do, those things related to my profession would be at or near the top.

Young dietitians in the Stone et al. (8, 167) study responded to the career involvement items in a similar manner, also indicating high levels of pride and identification with their chosen profession. The dietetic students/interns, however, tended to agree with the statements more strongly than did the dietetic practitioners.

Table 36. Responses of dietetic students/interns on career involvement items

career involvement item	group	strongly agree	agree	disagree	strongly disagree	χ^2
		← ————— % ————— →				
I identify strongly with my profession.	CUP ¹ intern ²	38.1 35.7	56.4 55.4	5.0 8.1	.5 .8	8.29*
My chosen profession gives me a sense of pride.	CUP intern	51.6 42.5	44.5 52.1	3.3 4.9	.6 .5	17.01***
Compared to other areas of my life, my chosen profession is very important to me.	CUP intern	33.8 27.4	56.4 59.8	8.9 11.8	.9 1.0	11.13**
If I were to describe myself to someone, I would probably begin by stating my chosen profession.	CUP intern	23.3 18.9	46.7 41.9	26.8 34.2	3.2 5.0	18.78***
If I were to rank in importance to me all the things that I do, those things related to my profession would be at or near the top.	CUP intern	27.9 23.9	54.8 57.4	15.4 16.2	1.9 2.5	4.36

¹N varies from 1154 to 1159.²N varies from 765 to 770.* $p < .05$ ** $p < .01$ *** $p < .001$

In Table 37, the analysis of the effects of selected variables on ratings of career involvement items are reported, along with a career involvement score, computed as the sum of the five career involvement items. The means of three statements were significantly higher for the CUP students than was true for the interns, indicating somewhat higher levels of feelings of career involvement for the CUP students. In addition, the career involvement score was significantly higher for the students than for the interns. The respondents labeled as high in professional identification, predictably scored high on career involvement; all items were significantly higher for this group than for those low in professional identification. Respondents highly home economics-oriented were significantly more in agreement with the first two items than were the students low in home economics orientation; these students/interns identified more strongly with the profession and had a stronger sense of pride from their chosen profession.

Professional Identification

The professional identification items, also used by Stone et al. (8, 167), were adapted from Patchen's (173) organization measures. In Table 38, the CUP student and intern responses to the six items are presented. The responses to the first two items on criticism of the profession indicated that the students/interns tended to defend the profession for the most part; however, they agreed more with the dietetic professionals on criticisms, but took offense to criticism from those outside the profession--a finding consistent with the results reported by Stone et al. Interns reacted to the criticism from those outside the profession with more anger than did CUP students, yet tended to agree with the criticism from dietitians more than did CUP students.

Table 37. Effects of selected variables on ratings of career involvement measures¹

career involvement measure	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	least square means ² and std. error					
I identify strongly with my profession.	3.31 ±.02	3.29 ±.02	3.13 *** ±.02	3.46 ±.02	3.27 ±.02 *	3.32 ±.02
My chosen profession gives me a sense of pride.	3.46 ±.02	** 3.39 ±.02	3.26 *** ±.02	3.59 ±.02	3.39 ±.02 *	3.45 ±.02
Compared to other areas of my life, my chosen profession is very important to me.	3.22 ±.02	* 3.16 ±.02	3.04 *** ±.02	3.33 ±.02	3.18 ±.02	3.20 ±.02
If I were to describe myself to someone, I would probably begin by stating my chosen profession.	2.89 ±.02	** 2.77 ±.03	2.67 *** ±.03	2.99 ±.03	2.82 ±.03	2.84 ±.03
If I were to rank in importance to me all the things that I do, those things related to my profession would be at or near the top, ³	3.08 ±.02	3.05 ±.03	2.93 *** ±.02	3.20 ±.02	3.08 ±.02	3.05 ±.02
Career involvement score ³	15.95 ±.07	** 15.66 ±.08	15.03 ±.08	16.57 ±.08	15.74 ±.08	15.86 ±.08

¹N varies from 1918 to 1929. Refer to Table 18 for other explanatory footnotes.²Scale = 1, strongly disagree to 4, strongly agree.³Career involvement score = sum of the five career involvement items; overall mean = 15.83.

Means significantly different,

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 38. Responses of dietetic students/interns on professional identification measures

measure	response categories	group		χ^2
		CUP ¹	intern ²	
		%	%	
How do you feel when you hear someone outside of the profession criticizing the field?	agree with criticism	4.0	5.5	13.10**
	does not bother me	8.2	6.0	
	makes me a little angry	36.9	31.4	
	makes me angry most of the time	34.0	39.7	
	makes me quite angry	16.9	17.4	
How do you react when you hear other dietitians criticizing the dietetic profession?	agree with criticism	12.3	21.2	32.36***
	does not bother me	16.2	11.2	
	makes me a little angry	34.1	31.5	
	makes me angry most of the time	24.2	24.0	
	makes me quite angry	13.2	12.1	
In general, how often do you tell someone in your immediate family about your education in dietetics?	once every few months	6.6	9.7	25.18***
	about once a month	10.0	11.9	
	several times a month	25.5	26.6	
	once a week or more	34.7	37.1	
	almost daily	23.2	14.7	

¹N varies from 1101 to 1169.²N varies from 731 to 777.

** P < .01

*** P < .001

Table 38. (cont.)

measure	response categories	group		χ^2
		CUP	intern	
		%	%	
In general, how often do you tell friends and acquaintances about your chosen profession?	once every few months	6.7	10.9	23.42***
	about once a month	14.2	17.1	
	several times a month	28.2	30.0	
	once a week or more	33.9	30.5	
	almost daily	17.0	11.5	
If you could begin your education over again, how likely would you be to choose the dietetic profession?	definitely choose another profession	1.6	2.8	45.23***
	probably choose another profession	5.6	10.2	
	undecided	13.6	18.9	
	probably would choose dietetics	40.4	41.6	
	definitely would choose dietetics	38.8	26.5	
How would you advise a relative or friend who is considering going into the dietetic profession?	definitely advise against it	.5	1.3	60.58***
	probably advise against it	2.1	5.0	
	neither encourage nor discourage	16.7	27.7	
	probably encourage it	51.0	45.7	
	definitely encourage it	29.7	20.3	
		mean and std. error		F value
professional identification score ³		21.80 ±.11	20.60 ±.14	47.43***

³Score computed from the six professional identification items.

Some respondents indicated that they had not heard criticism; others were disturbed by it. When asked about their reaction to critical comments from individuals outside the field, some students/interns clarified their responses with the following statements:

- This is where marketing a new image for ourselves is important.
- I defend the profession--emphasize the importance of, and positive points.
- There are problems within the profession, which need open discussion.

Some respondents wrote the following comments when asked about their reaction to hearing dietitians criticize the profession:

- They usually have legitimate and practical criticisms; they speak from knowledge and experience.
- It is up to us to make the changes and not just gripe about the weaknesses.

Some students/interns were quite angered by such comments from dietitians:

- . . . I'm tired of hearing it, especially as a student.
- Sometimes valid, but sometimes not valid; if not valid, I get angry.
- Then they should get out of the profession or do something positive to change it.

The Study Commission on Dietetics (181) reported that many dietitians were not satisfied with the image of the profession held by the public and that the younger members were the most concerned about the negative image. Many believe the profession is losing ground, rather than gaining, the report also stated.

About half of the respondents talked to their families at least once a week about their education in dietetics; also, they frequently talked to friends at least once a week about this subject. Data from the last two measures of professional identification indicated that the students/

interns were positive about their career choice and were comfortable about recommending dietetics to a friend or relative. CUP students, however, were significantly more positive on both items; more than 80% of the students probably or definitely would choose dietetics as a profession again, compared to less than 70% of the interns. Most of the CUP students (> 80%) probably or definitely would encourage a relative/friend considering a career in dietetics, compared to 66% of the interns. The professional identification score, computed from the six professional identification items, also was significantly higher for the CUP students than for the interns.

Patchen (173) reported that individuals in upper-level positions in his study tended to be more angered over criticism against their organizations than were those in lower-level positions. This defense of the organization, Patchen stated, represents loyalty or identification to the organization, or in this case--profession. McNeil et al. (176, 177) found fairly high levels of organizational identification in their survey of hospital foodservice administrators. A fairly high level of professional identification also was reflected among the young dietitians in the Stone et al. (8, 167) study, who reported they would defend the profession to outsiders. They also discussed the profession with family and friends frequently, and would not only choose it again but would recommend dietetics as a career choice to a family member.

Correlations of selected scores computed from data in the study are presented in Table 39. The highest correlation (r , .41) was between professional identification and career involvement, which indicates that those high in professional identification also are high in career involvement. This pattern also was found in the data presented in Table 37. The

Table 39. Correlation¹ of selected scores

score ²	overall mean and std. dev.	career involvement	professional identification	professional involvement
1. career involvement	15.82 ± 2.46			
2. professional identification	21.32 ± 3.83	.41***		
3. professional involvement	5.24 ± 2.22	.01	-.02	
4. potential career satisfaction	154.52 ± 33.62	.30***	.32***	-.02

¹N varies from 1887 to 1950.²Refer to Table 2 for computation of scores.

*** p ≤ .001

professional identification and potential career satisfaction scores were positively correlated ($r, .32$), as were career involvement and potential career satisfaction ($r, .30$). These findings suggest that those respondents who take pride in and defend the profession, and are sure about their career choice and would recommend it to others, believe they will find sources of satisfaction in the dietetic profession. No relationships were reflected between the remaining scores.

Career and Educational Plans

Initial Job Preference

For the respondents who intended to enter dietetic practice after graduation, the mean rankings (1, first choice to 7, last choice) of their preferred areas for an initial job are listed in Table 40. Also included are results from analysis of the effects of selected variables on the ranking of preferred areas of practice. Clinical dietetics was ranked most favorably by both students and interns; public health/community nutrition was the second choice for the CUP students, while the interns favored a generalist position for a second choice. Interns expressed somewhat more interest in a career in business and industry than did the CUP students; however, a business career was one of the least preferred for both groups as a first position. Foodservice management and media/communications were the other two least preferred initial job areas. Initial positions in private practice or consulting held a fair amount of interest for both groups, ranking behind clinical dietetics, public health/community nutrition, and generalist positions. Perhaps most of the respondents recognized that a position in an organization would provide them needed experience before launching an independent practice.

Table 40. Effects of selected variables on ranking of preferred area of dietetic practice for initial job¹

area of practice for initial job	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	least square means ² and std. error					
clinical dietetics	2.21 ±.06	2.34 ±.08	2.45 *** ±.07	2.09 ±.07	2.18 * ±.07	2.36 ±.07
foodservice management	4.94 ±.07	4.99 ±.08	4.92 ±.08	5.02 ±.07	5.16 *** ±.07	4.77 ±.07
public health/community nutrition	3.34 ±.06	3.55 ±.08	3.47 ±.07	3.42 ±.07	3.43 ±.07	3.46 ±.07
generalist	3.68 ±.06	3.38 ±.07	3.54 ±.06	3.51 ±.06	3.53 ±.06	3.52 ±.06
private practice/consulting	3.88 ±.06	3.85 ±.08	3.85 ±.07	3.89 ±.07	3.79 ±.07	3.95 ±.07
business/industry	4.50 ±.06	4.30 ±.08	4.32 ±.07	4.49 ±.07	4.42 ±.07	4.39 ±.07
media/communications	5.24 ±.06	5.35 ±.07	5.21 * ±.06	5.38 ±.06	5.24 ±.06	5.35 ±.06

¹N varies from 1439 to 1491. Students/interns who planned to initiate graduate study after graduation did not respond to item. Refer to Table 18 for other explanatory footnotes.

²Rank order = 1, first choice for area of practice of initial job to 7, last choice.

Means significantly different,

* $p \leq .05$

*** $p \leq .001$

When examining low vs. high professional identification, respondents categorized as "high," favored clinical dietetics somewhat more than those labeled "low," yet it was the first choice for both groups. Similarly, for both groups, a career in media/communications ranked last, but respondents "low" in professional identification favored it more. Respondents high in home economics orientation favored foodservice management somewhat more, and clinical dietetics less, than did those low in home economics orientation.

Plans for Graduate Study

Data on the educational plans of dietetic students and interns are presented in Table 41. Large percentages of both groups had plans to pursue graduate study, although significantly more interns (87.4%) than students (73.3%) had such plans. Interns also anticipated initiating graduate study sooner than did students; however, many interns were currently enrolled in a combined master's degree/internship program. Nutrition and clinical dietetics, respectively, were the primary areas of academic interest for those respondents planning to pursue graduate study (Table 42). Public health/community nutrition was the third choice indicated by the respondents. About 10% were interested in pursuing a master's in business administration and a somewhat smaller percentage was interested in an advanced degree in education. Little interest was shown in foodservice management or food science as a graduate major, however.

In the 1981 census of The American Dietetic Association (14), data indicated almost 40% of ADA members held a master's degree or were working toward one. Another 4% of members were working on or held a doctorate. Dietetics/nutrition was the most common choice for advanced degrees pursued by ADA members, with 58% of those with master's or working on a

Table 41. Educational plans of dietetic students/interns

educational plans	group		χ^2
	CUP (N = 1154)	intern (N = 768)	
	%	%	
highest degree anticipated			
bachelor's	22.1	9.5	
master's	63.9	76.1	
doctorate	13.0	14.1	
other	1.0	.3	56.13***
plan to pursue graduate study	73.3	87.4	54.81***
anticipated time of initiating graduate study ¹			
not sure	21.9	15.6	
immediately after completing CUP or internship	11.5	18.8	
within 1-2 years	28.5	24.2	
within 3-5 years	35.5	28.5	
other	2.6	12.9 ²	86.02***

¹% based on number indicating they had plans for graduate study.

²Most of the "other" responses were interns enrolled in a master's degree/internship program.

*** $P \leq .001$

Table 42. Primary area of academic interest of dietetic students/interns planning to pursue graduate study (N = 1517)

area of interest	first choice	second choice
	% ¹	% ²
nutrition	24.9	19.1
clinical dietetics	24.9	14.0
foodservice management	7.8	6.1
food science	3.4	4.4
public health/community nutrition	17.6	15.0
education	7.2	9.4
business administration	10.7	10.3
other	9.0	4.0

¹Percentages total more than 100 because several respondents indicated more than one first choice.

²Percentages total less than 100 because several respondents did not indicate a second choice.

master's and 47% of those enrolled in doctoral study or holding doctorates choosing this area. Advanced degrees in education were the second most common choice, with a somewhat larger proportion of all doctoral degrees awarded in this area. Business administration was selected by about 7% of ADA members who had or were pursuing a master's degree, but few doctoral degrees in business were held by ADA members. About 9% of master's and 6% of doctoral degree recipients and candidates chose public health and institutional management as their area of study.

In comparing the data from the present study to the findings of the ADA census (14), the percentage of students/interns planning to pursue

graduate study was larger than the percentage of dietetic practitioners who had an advanced degree or were working toward one. In addition, more students/interns had aspirations to pursue a doctorate than did the ADA members who responded to the 1981 census. The area of academic interest for graduate study was similar between the two groups, although the students/interns in the present study expressed more interest in public health and business administration, and somewhat less interest in education than did the ADA members in the census report. These comparisons, of course, are only conjectural, yet the data suggest that dietitians will continue to receive advanced degrees in increased proportions. These numbers will be in addition to the practitioners who pursue the advanced degree route to ADA membership, which has gained popularity in recent years and has increased the proportion of dietitians with advanced degrees (14). According to a recommendation from the Report of the Study Commission on Dietetics (181), advanced education should be considered desirable for all dietitians, whether functioning as generalists or specialists.

Expected Employment Pattern

More than half of the students/interns anticipated regular full-time employment in the dietetic profession five years after their graduation (Table 43). In 10 years, this percentage was reduced to about 30% and the percentage of those anticipating employment in a field related to dietetics increased. The data do indicate, however, that the students/interns have a strong career commitment and, particularly, commitment to dietetics. Only a small percentage ($< 3\%$) saw themselves out of the work force in 10 years and an even smaller percentage ($< 2\%$) thought they would leave the dietetic profession.

Table 43. Anticipated employment status of dietetic students/interns¹

employment status	status in 5 years (N = 1953)	status in 10 years (N = 1943)
	%	%
regularly employed in dietetics on a full-time basis	58.0	32.3
regularly employed in dietetics on a part-time basis	8.9	15.5
employed, full- or part-time, in a field related to dietetics	13.7	25.9
employed, full- or part-time, in some other field	.6	1.9
out of the work force at least temporarily	1.1	2.8
attending graduate school	7.7	3.1
uncertain of plans	10.0	18.5

¹Data based on combined group of students/interns.

Long-term Career Objectives

Students/interns also were asked to rate various job titles according to their appeal as a long-term career objective, and to indicate the position that best represented a professional ideal for them (Table 44). Of the four administrative positions listed, a director of a dietetic department was rated as the most appealing. School or college foodservice director was the least appealing of the administrative positions, with more than half of the respondents indicating that they were "of no appeal." All three clinical positions received high ratings of appeal with more than 25% of the respondents rating a clinical specialist as quite appealing and almost 50% rating it as very appealing. Of the 18 job titles

Table 44. Degree of appeal of various career opportunities as a long-term career objective for dietetic students/interns

job title	degree of appeal				job title representing professional ideal ¹
	of no appeal	mildly appealing	quite appealing	very appealing	
	$\xleftarrow{\hspace{1.5cm}} \hspace{0.2cm} \% \hspace{0.2cm} \xrightarrow{\hspace{1.5cm}}$				%
administrative positions					
director of dietetic department	15.6	34.4	27.7	22.3	5.1
head administrative dietitian	25.2	33.8	22.8	18.2	3.1
school foodservice director	52.8	27.0	14.2	6.0	.8
college residence hall foodservice director	61.0	23.6	11.2	4.2	.5
clinical positions					
head clinical dietitian	11.8	23.9	30.9	33.4	7.9
clinical specialist	9.9	18.1	26.1	45.9	18.1
research dietitian	29.8	31.3	21.1	17.8	2.5
private practice/consulting					
private practice	3.2	12.9	23.7	60.2	25.1
healthcare facility consultant	5.2	17.8	33.2	43.8	4.4

¹After rating the job titles for degree of appeal, dietetic students/interns (N = 1565) recorded the single job title that best represented their professional ideal.

²N varies from 1901 to 1912. Data based on combined group of students/interns.

Table 44. (cont.)

job title	degree of appeal				job title representing professional ideal
	of no appeal	mildly appealing	quite appealing	very appealing	
	←	→	→	→	%
business and industry					
commercial foodservice manager	49.7	26.7	15.9	7.7	.9
executive/manager for contract food company	36.2	29.7	19.0	15.1	2.1
dietitian in business or industry	7.7	22.7	31.3	38.3	9.4
nutrition writer/food editor	25.5	30.3	23.3	20.9	3.1
public relations specialist	25.9	32.5	24.5	17.1	1.4
community positions					
public health/community nutritionist	7.1	21.8	33.0	38.1	11.2
education positions					
internship director	36.3	33.7	20.2	9.8	.6
• CUP director	46.9	30.5	15.2	7.4	.5
college faculty	33.7	28.7	21.4	16.2	3.3

listed, private practice was rated as the most appealing, with more than 80% rating it as quite or very appealing.

Little interest was shown in a position as a commercial foodservice manager or an executive/manager for a contract food company. A sizeable number were interested in positions as a dietitian in business and industry and were somewhat interested in a career in media and communications. A position in public health was quite or very appealing to more than 70% of the respondents. The three education positions were rated quite low. More respondents found those positions mildly appealing or of no appeal, than quite or very appealing.

The top four job titles, according to the percentages indicating the positions as a professional ideal for the respondents included: private practice, clinical specialist, public health/community nutritionist, and dietitian in business or industry. The least appealing positions, indicated by the small percentages of respondents considering them as professional ideals included: college residence hall foodservice director, CUP director, internship director, school foodservice director, and commercial foodservice manager. The majority also rated these five positions as mildly or of no appeal.

The overwhelming preference of the students/interns for a long-term career objective was in private practice/nutrition counseling. About 25% of the respondents indicated that private practice represented a professional ideal for them. In the 1981 ADA census (14), however, only 4% of the ADA members responding to the census survey (92%) were in a consulting business. According to Fitz and Baldyga (183), this is a difficult group for which to project demand because much of the private practitioners' success in employment depends on their entrepreneurial behavior. Overall,

they stated, the demand for the self-employed/consultant group is seen as rising at a substantial rate, but with the increase in the absolute number of practitioners relatively small. As an assumption for 1984 budget planning (184), based upon environmental analysis, ADA's leadership projected that more dietitians will be self-employed. But according to Owen (185), in order for dietitians to survive in this rapidly changing environment, marketing sophistication is needed. Owen asserted that a traditional view of marketing as only advertising or consumer manipulation has limited the dietitian's effectiveness in presenting the product of the profession--i.e., nutrition.

A career in public health/community nutrition also was quite appealing for the majority of CUP students and interns, with more than 11% of the respondents indicating that this position represented their professional ideal. The Dietetic Manpower Demand Study (186), however, did not project a favorable climate for the public health nutritionist. According to the study, little or no growth is expected in public health programs.

A surprising number of students and interns were interested in some of the newer positions opening up to dietitians, such as nutrition writers and public relations specialists. One respondent interested in a public relations career commented:

Now is the time for dietitians to become market-oriented in a society where this is truly the thrust. It is time to market our skills and change the image of the fat old woman at a nursing home.

Other popular positions listed by the respondents that were not among the list of 18 job titles on the research instrument included:

- sports nutritionist,
- coordinator of a corporate wellness program/fitness center,
- health spa nutritionist/institutional exercise director,

- nutritionist for World Health Organization (WHO),
- equipment specialist/kitchen designer, and
- state specialist in extension.

Some students and interns saw their training in dietetics as a credential to achieve other career goals, or as a background for future academic work. The following were among the long-term career objectives for these individuals:

- sales representative for a pharmaceutical company,
- hospital administrator,
- lawyer specializing in medical malpractice,
- physician,
- psychologist, and
- politician ("in order to influence nutrition legislation").

One respondent did not consider herself as having chosen dietetics as a career and made this comment about her career goals:

I haven't selected it [dietetics] as a career. I have chosen it to become eligible to be registered to seek a career in nutrition education. [I] have a B.S. in nutrition and found employment impossible without R.D.

This comment was interesting, because it reflected a limited view of the opportunities of a career in dietetics; nutrition education certainly would be included within the realm of possibilities for employment in the dietetic profession.

According to Fitz et al. (186), the challenge to dietitians will be to demonstrate their professional expertise in nontraditional settings. New roles for the R.D. evolve in public communications, computer systems management, and the food and foodservice industries. New opportunities for dietetic practice also were discussed in the report of the 1984 Study Commission on Dietetics (181). Many of the nontraditional positions that

the dietetic students and interns in this study listed as appealing careers were included in that report. Other emerging positions identified by the Study Commission were in gerontology centers, rehabilitation centers, drug control centers, and similar institutions. In each instance, the report stated, it will be necessary for dietitians to play a leadership role in demonstrating the importance of nutrition services. In addition, opportunities for dietitians in business and industry should be explored more carefully and systematically than in the past, the report stated. The Commission made the following recommendation regarding dietetic practice:

ADA should explore the many opportunities for dietetic practice and identify clearly how dietitians might function in these new surroundings.

The 18 job titles in Table 44 were categorized into five areas of practice to compute career interest scores. These scores were computed as averages of ratings of two or more job titles in each area. Data on the effects of selected variables on ratings of the appeal of these five areas are shown in Table 45. For the combined group of students and interns, the areas can be ranked in the following order of descending appeal: private practice/consulting, clinical, business/industry, management, and teaching. CUP students were significantly more interested than were interns in management. The mean score assigned to management by interns was < 1 , indicating that this area was "of no appeal" to them, and it ranked the lowest of the five areas. CUP students, however, ranked teaching as the lowest and the mean score for this area was < 1 , indicating that teaching was "of no appeal." Interns were significantly more interested in teaching than were students, yet this area was only slightly appealing to them and it ranked second to the lowest of the five areas.

Table 45. Effects of selected variables on ratings of the appeal of various areas of practice as long-term career objective¹

career interest score ²	group		professional identification		home economics orientation	
	CUP	intern	low	high	low	high
	least square means ³					
management	1.11 ±.02	*** .99 ±.03	1.02 ±.02	* 1.08 ±.02	.98 ±.02	*** 1.12 ±.02
clinical	1.75 ±.02	1.72 ±.03	1.67 ±.02	*** 1.81 ±.03	1.74 ±.02	1.73 ±.02
teaching	.98 ±.02	** 1.09 ±.03	1.04 ±.03	1.03 ±.03	1.00 ±.03	* 1.07 ±.03
private practice/consulting	2.28 ±.02	2.29 ±.03	2.23 ±.02	** 2.33 ±.02	2.29 ±.02	2.27 ±.02
business/industry	1.33 ±.02	1.34 ±.03	1.33 ±.02	1.34 ±.02	1.29 ±.02	** 1.38 ±.02

¹N varies from 1911 to 1917. Refer to Table 18 for other explanatory footnotes.²Scores computed as averages of ratings of two or more jobs in each area of practice.³Scale = 0, of no appeal to 3, very appealing.

Means significantly different,

* $p < .05$ ** $p < .01$ *** $p < .001$

Since some of the interns were in master's degree/internship programs, perhaps they could see achieving credentials for teaching more readily than could the CUP students.

Although the area of management was only mildly appealing to the CUP students, they were significantly more interested in a management career than were interns. Argo (187) suggested that interns are more client-oriented, as internships are predominantly in hospital settings where client-oriented functions (supportive and nurturant processes) are priorities. She asserted that the internship programs advocate the traditional dietetic practice role oriented toward interactions with clients. CUP students, on the other hand, are more organizationally-oriented, as CUP programs are usually based in university settings that are more divorced from the practice setting. She asserted that CUP programs emphasize organizational goals. These observations made by Argo bring interesting insight in attempting to understand the career interest findings.

Fruin (188) found that undergraduate dietetic students in her sample perceived management-related tasks as less important in dietetic practice. This failure to perceive the area of management as equally important to the profession as nutrition is of particular concern if the growth of the profession is to be in management areas, Fruin concluded.

A recent study by Palacio (189) found that the clinical dietitian role includes a management component. Her data from dietetic professionals in hospital settings suggested that while managerial tasks comprise a limited portion of the lower level clinical position, these activities become substantially more important as an individual moves into more

responsible middle-level positions as head clinical or assistant/associate positions or into upper administrative positions.

Zolber (190) asserted that professional survival for dietitians necessitates a strong management orientation. The individual must possess an ability to recognize need for change, delegate, boost productivity, utilize research methods, recognize professional competition, and to update knowledge through continuing education. According to Hoover (191), to assure the viability of the dietetic profession, the emphasis on management must be more comprehensive and rigorous. Similarly, Zallen (192) stressed the need to link administrative and clinical dietetics. To be influential is a necessity, she stated, and dietitians who have management skills are able to be more influential in their workplace. Their influence will reach physicians, other health professionals, administrators, patients, clients, the public, and politicians.

The respondents high in professional identification were somewhat more interested in management, clinical, and private practice/consulting, than were those low in professional identification (Table 45). Respondents more highly home economics-oriented, compared to those low in home economics orientation, were somewhat more interested in management, teaching, and business/industry.

The correlations of the career interest scores are shown in Table 46. The highest correlation coefficient (r , .39) was found between management and business/industry, which indicates that those respondents most interested in a career in management also believed they would find appeal in some of the newer positions opening up to dietitians in business/industry as a long-term career objective. In addition, the correlations indicate that the respondents most interested in business/industry also

Table 46. Correlation¹ of career interest scores

career interest score ²	overall mean and std. dev. ³	MGMT	CLIN	TEACH	PRIV
management	1.06 ±.70				
clinical	1.74 ±.76	-.05			
teaching	1.02 ±.82	.20	.18		
private practice/consulting	2.28 ±.73	-.05	.20	.10	
business/industry	1.34 ±.70	.39	-.05	.24	.16

¹N varies from 1914 to 1958. All correlation coefficients significant at $P \leq .05$.

²Scores computed as averages of ratings of the degree of appeal of two or more jobs in each area of practice.

³Career interest scale = 0, of no appeal; 1, mildly appealing; 2, quite appealing; 3, very appealing.

would find teaching positions more appealing ($r, .24$), as would those most interested in management ($r, .20$). Those most interested in clinical positions in terms of long-term career plans, would tend to find private practice/consulting appealing ($r, .20$). Although the correlation coefficient was somewhat smaller ($r, .16$), those more interested in business/industry also tended to be more interested in private practice, perhaps reflecting an "entrepreneurial spirit" among a segment of the dietetic students and interns.

The data from the correlations indicate that many of the respondents may tend to have a narrow range of career objectives. For instance, those

most interested in clinical positions in terms of a long-term career objective also tended to find private practice/consulting appealing, yet had less interest in other areas of dietetic practice, such as management or business/industry.

Career motivation and career interest scores were correlated to examine if the career characteristics perceived to be important by the students/interns were related to their preferred area of dietetic practice (Table 47). All correlation coefficients were fairly low; only one was $> .25$. Most of the strongest relationships were associated with those respondents interested in business and industry. This long-term career interest score was correlated highest with Independence/Self-sufficiency ($r, .32$), Monetary Reward ($r, .25$), and Prestige ($r, .21$). The career importance factor of Social Service was correlated highest with the career interest score of clinical ($r, .18$) and private practice ($r, .19$).

The career interest scores also were correlated with the potential satisfaction factor scores to determine if perceived future career satisfaction of the respondents was related to their preferred area of practice as a long-term objective (Table 48). All correlations were low ($r < .20$), indicating that the two measures generally were unrelated. Data suggest that those perceiving their career choice as potentially more satisfying (overall potential career satisfaction) were somewhat more interested in management ($r, .11$) than in any of the other five areas. Students/interns interested in management also saw themselves as being somewhat more satisfied with Professional Power ($r, .16$) in a dietetic career. The group more strongly oriented to clinical positions tended to perceive they would receive greater satisfaction in the Service to Others aspect of their dietetic career ($r, .14$).

Table 47. Correlation¹ of career importance and career interest scores

career importance factor score ²	career interest score ³			
	management	clinical	teaching	private practice business/industry
I. Prestige	.06	.11	.09	.08
II. Monetary reward	.14	.04	.04	.09
III. Independence/ self-sufficiency	.14	.07	.15	.11
IV. Professional challenge	.03	.14	.07	.11
V. Self-realization	-.02	.11	.06	.15
VI. Social service	-.02	.18	.03	.19
VII. Social stimulation	-.01	.11	.04	.12

¹N varies from 1873 to 1880.
 $r \leq .05$
 $r \leq .01$

²Scores derived from principal component analysis of ratings of the importance of various characteristics of a career. Refer to Table 2 for computation of scores.

³Scores computed as averages of ratings of the degree of appeal of two or more jobs in each area of practice.

Table 48. Correlation¹ of potential career satisfaction and career interest scores

potential satisfaction ² factor score ²	career interest score ³			
	management	clinical	teaching	private practice business/industry
I. Professional challenge	.09	.11	-.01	.06 -.03
II. Service to others	.04	.14	-.02	.10 -.03
III. Financial	.10	.04	.01	-.04 -.02
IV. Professional power	.16	.06	.04	.00 .06
V. Prestige	.10	.06	.01	.00 .01
VI. Professional stimulation	.03	.12	.02	.05 .02
Overall potential career satisfaction ⁴	.11	.09	-.01	.01 -.03

¹N varies from 1848 to 1859.

r .05, $P < .05$

r .08, $P \leq .01$

²Scores derived from principal component analysis of ratings of potential sources of career satisfaction. Refer to Table 2 for computation of scores.

³Scores computed as averages of ratings of the degree of appeal of two or more jobs in each area of practice.

⁴Index of overall satisfaction, derived from responses to 32 items. Refer to Table 2 for computation of scores.

SUMMARY AND CONCLUSIONS

Summary

Two major reasons have been cited for studying careers. First, and perhaps of most importance, the career concept is central to an understanding of individual identity. The second reason revolves around research into the nature and workings of complex organizations. A better understanding of organizations is possible with a basic conception of the values, beliefs, and cognitive styles of people staffing the organizations, all of which are related to the training and subsequent careers of individuals. A connection between career effectiveness and organizational effectiveness has been emphasized in the literature. The more effective the careers of an organization's employees, the more likely the organization is to reach its objectives.

In addition, having insight into the factors influencing the choice of a particular career can aid the recruitment effectiveness and career guidance for that profession. The American Dietetic Association has long had an interest in manpower issues. The prime focus of the organization's manpower concerns has been the development of a work force population through recruitment and education, thus assuring a supply of adequately trained and competent dietetic personnel. The 1984 Study Commission on Dietetics, which recently completed its work under a grant from the W.K. Kellogg Foundation, recommended that ADA should provide the youth of America with accurate, up-to-date information about careers in dietetics and work actively to recruit dynamic and progressive students for leadership roles in the revitalized profession envisioned for the future.

Few studies, however, have examined the career choice process in the field of dietetics. Stone et al. used a sample of young dietitians, or those less than 30 years of age, to study the factors affecting career choice and career satisfaction. That study was used as the basis for planning the current study. The overall objective of this research was to study career selection and related variables among dietetic students and interns. Specific objectives were to (a) investigate factors influencing selection of a career in the dietetic profession, (b) measure levels of professional identification and commitment, (c) assess career aspirations, (d) identify aspects important in a career and potential sources of career satisfaction in dietetics.

Junior and senior students in coordinated undergraduate programs in dietetics (CUPs) and interns in dietetic internships were selected as the sample for the study. Program directors were initially contacted to request assistance with the study and determine the sample number. Directors of all of the 64 CUP programs and 102 of the 105 internships, or 98% of the accredited programs, agreed to participate in the study. The final prospective sample, identified by the program directors, consisted of 1,489 CUP students and 888 dietetic interns, or a total of 2,377.

The six-page research instrument was adapted primarily from that used by Stone et al. to study career choice and career satisfaction of young dietitians in the early establishment stages of their careers. Part I of the seven-part instrument, included demographic items: gender, marital and family status, age, and classification--junior, senior, or intern. Questions in Part II were concerned with time of career selection and various influences on the students/interns' career decision. Items in

Part III obtained data on family background, high school and college academic work and activities, and professional activities. Items in Part IV were designed to determine the students/interns' career interests and plans for graduate study. Part V included items on career involvement and professional identification and Parts VI and VII assessed aspects of career importance and potential satisfaction in dietetics.

Of the participating programs with directors who had agreed to assist with the study, questionnaires were returned from all but two programs. A total of 2,033 instruments, or 86% of those distributed, were returned from CUP students and dietetic interns by the program directors.

Background and Characteristics of Respondents

Of the combined group of dietetic students and interns, 97% were female. For the most part, the age of the respondents was typical for their respective group, with the interns being slightly older, as expected, and the CUP students closer to the ages of 20 to 22. A larger number of students/interns than expected, however, were found to be out of the typical age range; about 20% of the CUP students and more than 25% of the interns were 26 or older, indicating that many of the respondents had chosen dietetics after another major, or perhaps after another career. The majority of both students and interns were not married and did not have children.

In examining the high school experiences of the respondents, most students/interns graduated from a medium- to large-size high school and completed courses in biology, chemistry, advanced algebra, and trigonometry. About 40% had taken a foods class and about 60% had taken another home economics course. The average high school grade point average (GPA) of the total group was 3.47 on a 4.0 scale and a large number of

students/interns participated, either as a member or a leader, in student council and honoraries/honor societies. Few respondents were involved in 4-H or Future Homemakers of America (FHA). Similarly, few participated in college 4-H or FHA, although most were involved in departmental clubs such as the Student Dietetic Association. The average college GPA of the total group was 3.33 on a 4.0 scale.

Career Selection

Dietetics was not a first career commitment for more than 60% of the dietetic students and interns (referred to as "later selectors"). Of those selecting dietetics initially (referred to as "first selectors"), more than 50% chose their career before college. Less than 20% selecting another area first, chose dietetics before college. A majority selecting another area initially (> 60%) chose it during their second year of college or later. About half of both the CUP and intern groups chose dietetics during the second year of college or later. The most frequent career choice prior to dietetics was a health-related profession, such as nursing, physical therapy, and social work. Data indicate that most initial choices were a professional area; few had been liberal arts majors before choosing dietetics.

Influences on Career Choice

Although academic courses were not a significant influence for the majority of respondents, an introductory foods and nutrition class in college was found to have been a factor in recruitment of a sizeable number of students and interns to dietetics. Respondents reported that the greatest sources of influence on their selection of a career came from college faculty, dietetic professionals, and mother. "Myself" or

"no one" was the fourth greatest source of influence, with more than 10% of the respondents indicating that their own interests influenced them to select dietetics. Several responding with "myself" or "no one" as the greatest influence reported that they themselves had a weight problem or an eating disorder and, thus, independently became interested in nutrition to try and change their own dietary habits.

To examine the influence of family members, questions were asked concerning education and occupation of the students/interns' parents and other relatives. About half of the respondents' fathers and 35% of their mothers had a bachelor's degree or above. Almost all of the parents had at least a high school diploma. The largest percentage of fathers were in the professional/technical category; one-fourth of the mothers were in this category, but the largest percentage of mothers were in the homemaker category. Almost all of these homemaker mothers, however, had worked outside the home at some time. About 10% of the respondents had a relative who was a dietitian and more than 60% had a relative in another health profession.

Respondents frequently had worked as an aide in a healthcare setting or in a foodservice operation and perceived this work experience as being of some importance or very important in their decision to select dietetics as a career. The majority received information on the opportunities in dietetics from a knowledgeable person--presumably a dietetic professional during career-related work experience--and rated this experience as very important in their decision to major in dietetics. Almost all the respondents had read books, magazines, or newspaper articles related to dietetics and nutrition, which was considered very important in their career decision. Having a talent or interest in cooking and food

preparation and enjoying or excelling in high school science courses were additional strong influences for many of the respondents.

The most important consideration influencing the decision to major in dietetics for the majority of respondents was the program's appeal as an outlet for their interests and the things they liked to do. Also, most of both groups considered the intellectual challenge of the dietetic program to be of some importance or very important when selecting dietetics as their college major. Another very important factor for the CUP students and interns was the consideration that the potential job opportunities in the field seemed compatible with their future personal plans.

About 90% of the respondents rated "interesting work" as quite important in their decision to select dietetics as a career. The second most important influence was the "opportunity for service to society" that dietetics offered, with about 60% of both groups rating this factor as quite important.

Characteristics Important in a Career

Personal satisfaction, feelings of achievement, opportunity to use aptitudes and abilities, and opportunity to improve health of others were rated as the most important aspects of a career; while opportunity for travel, opportunity to direct work of others, prestige in the community, fun and relaxation with colleagues, and opportunity to help in policy-making were less important aspects for the respondents. From the 32 career characteristics, seven factors were derived from principal component analysis: Prestige, Monetary Reward, Independence/Self-sufficiency, Professional Challenge, Self-realization, Social Service, and Social Stimulation. Students/interns rated Self-realization, or the achievement of intrinsic satisfaction from one's work, as the most important aspect

of a career, followed by Professional Challenge and Social Service; Prestige was considered the least important.

Potential Sources of Career Satisfaction

The same 32 items, which were used to identify characteristics important in a career, also were used to identify the potential sources of satisfaction offered by the dietetic profession. The items with the highest overall means, indicating the aspects with the greatest potential for satisfaction in a dietetics career, were opportunity to use learned skills, opportunity to improve health of others, opportunity to use education, chance to improve skills, opportunity to use aptitudes and abilities, and intellectual challenge. The aspects in dietetics perceived by the respondents as potentially least satisfying were concerned with prestige, salary, and the opportunity to travel and to help in policy-making.

The six potential satisfaction factors, derived from principal component analysis were: Professional Challenge, Service to Others, Financial, Professional Power, Prestige, and Professional Stimulation. The students and interns saw Professional Challenge, or the opportunity to use intellectual capabilities, as the aspect most promising to be a source of satisfaction in dietetics, followed by Service to Others and Professional Stimulation. The aspects perceived to be least satisfying in the future careers as a dietitian were the factors Prestige and Financial.

Commitment to Dietetics

More than 80% of the students/interns were members of The American Dietetic Association and seemed interested in becoming involved in the profession, as a sizeable number had attended dietetic meetings at the

district and state level, and about 14% had attended one or more national dietetic meetings. More than 90% reported that they identified with the dietetic profession and it gave them a sense of pride. When asked about their reaction to hearing criticisms of the profession, the students/interns tended to defend the profession for the most part; however, they agreed more with the dietetic professionals on criticisms, but took offense to critical comments from those outside the profession. About half of the respondents talked to their families at least once a week about their education in dietetics; also, they frequently talked to friends at least once a week about this subject. They were positive about their career choice and were comfortable about recommending dietetics to a friend or relative.

Career and Educational Plans

Clinical dietetics was ranked most favorably as a preferred area for an initial job. Public health/community nutrition was the second choice for the CUP students, while the interns favored a generalist position for a second choice. Large percentages of both groups had plans to pursue graduate study; nutrition and clinical dietetics, respectively, were the primary areas of academic interest. About 10% were interested in pursuing a master's in business administration and a somewhat smaller percentage was interested in an advanced degree in education. Little interest was shown in foodservice management or food science as a graduate major, however.

More than half of the students/interns anticipated regular full-time employment in dietetics five years after their graduation. In 10 years, this percentage was reduced to about 30% and the percentage of those anticipating employment in a field related to dietetics increased. Only

a small percentage ($< 3\%$) saw themselves out of the work force in 10 years and an even smaller percentage ($< 2\%$) thought they would leave the dietetic profession, which indicates that the students/interns are committed to a career and, particularly, committed to a career in dietetics.

The overwhelming preference of the students/interns for a long-term career objective was a position in private practice/nutrition counseling. About 25% of the respondents indicated that private practice represented a professional ideal for them. Clinical dietetics, public health, and business and industry were additional areas found to be appealing to the students and interns. The least appealing positions, indicated by the small percentages of respondents considering them as professional ideals, included: college residence hall foodservice director, CUP director, internship director, school foodservice director, and commercial foodservice manager. The majority of respondents also rated these five positions as mildly appealing or of no appeal.

Comparison of CUP Students vs. Interns

In examining the high school experiences of CUP students and interns, several differences were noted. Interns tended to graduate from larger high schools, make better grades, were members more frequently of honoraries and honor societies, and had a somewhat stronger background in science and math. In addition, interns placed more importance on the experience of enjoying and/or excelling in high school science courses as an influence on their decision to select dietetics as a career. Interns also had a higher mean GPA in college and were more involved in college activities, particularly honoraries, than were CUP students.

Interns placed significantly greater importance on the intellectual challenge of the dietetic program and more frequently reported that they

planned to pursue graduate study than was true for CUP students. CUP students were influenced in their career choice significantly more than were interns by what has been labeled as "traditional female beliefs." These students placed more importance on combining family roles and other personal plans with dietetics, and considered dietetics as an appropriate "female career" more often than did interns.

Interns placed somewhat more importance than did CUP students on the following career characteristics: freedom to use own judgment, opportunity to use initiative, and intellectual challenge. CUP students, however, rated opportunity to help others find success or happiness and chance to evaluate own work as significantly more important in a career than did interns.

More interns than CUP students were members of The American Dietetic Association and other professional organizations. Interns also attended professional meetings more often than did CUP students; however, CUP students reported higher levels of feelings of career involvement and scored higher on professional identification than did interns. CUP students were significantly more interested in a career in management, while interns were significantly more interested in teaching, although neither area of practice was particularly appealing to either group as a long-term career objective.

Effects of Professional Identification

Students/interns categorized as high in professional identification, according to their responses on selected items from the research instrument, were significantly more influenced to select dietetics as a career by both parents, college faculty, college academic adviser, students in dietetic program, dietetic professionals, and other healthcare

professionals than were those categorized as being low in professional identification. In addition, those respondents higher in professional identification were influenced by dietetic-related work experience, dietitians who provided care to a family member/friend, dietetic- or nutrition-related materials, a knowledgeable person providing information about the dietetic profession, and an expertise/interest in food.

When compared to the respondents lower in professional identification, those categorized as highly identified were influenced in their choice of a college major by the intellectual challenge of the dietetic program, and were more concerned with the advancement potential, interesting work, and opportunity for service to society that dietetics offered. Of the seven dimensions of characteristics important in a career, only the factor score, Monetary Reward, did not differ between the low and high groups. Those in the "high" category valued the remaining six aspects of career importance as more important in a career and rated all of the potential career satisfaction scores higher, indicating that they were more positive about their future in dietetics. The respondents higher in professional identification also scored higher on career involvement and were somewhat more interested in management, clinical, and private practice than were those lower in professional identification.

Effects of Home Economics Orientation

For those students/interns with a background in home economics-related activities and who were labeled as being high in home economics orientation, a high school counselor and a high school teacher (presumably a home economics teacher) were strong sources of influence in selection of dietetics as a career. Also, respondents high in home economics orientation were influenced more by a college counselor, college academic adviser,

and students in the dietetic program than were those categorized as low home economics-oriented. In addition, they were influenced by their talent/interest in cooking and food, which is consistent with their more extensive background in home economics courses and related activities, such as 4-H and FHA.

Respondents high in home economics orientation were concerned more frequently with the compatibility of the field with their future personal plans and considered the "sex-role appropriateness" of the field as somewhat more important than did those lower in home economics orientation. Highly home economics-oriented respondents placed significantly more importance on social service opportunities in a career, yet rated secure future, good salary, and social prestige as being more important than did those low in home economics orientation. Compared with respondents with a more limited background in home economics, the respondents with a more extensive background were more positive about their prospective positions in dietetics, scored higher on career involvement, and favored foodservice management positions more, clinical dietetics less, and were somewhat more interested in teaching and business and industry as long-term career objectives.

Conclusions

The results indicate that CUP students and interns shared certain common experiences that had an impact on their choice of dietetics as a career. Many had worked in a healthcare setting as an aide or volunteer or in a foodservice operation. Professionals in the field should be encouraged to provide work opportunities for young people, since this previous work experience was found to be important in influencing career

choice. The dietetic students and interns also were influenced by dietetic professionals and a knowledgeable person who provided information on the opportunities in dietetics. This "knowledgeable person" presumably was a dietitian or other healthcare professional whom the respondents met during their career-related work experience. Dietitians should be aware that they may be serving as role models and could make a significant impact on the career choice of young students. Effort should be extended to portray a professional image to these young people and to assist in making their work experiences informative, yet positive.

Abilities and interests were indicated as one of the most important influences on career choice. Specific identification of the abilities and interests that influence selection of dietetics is needed. High school science classes were found to be somewhat important in attracting students to the field, indicating that the scientific aspect of the dietetic profession should be emphasized. Also, an interest or talent in cooking and food preparation was a common characteristic among both the CUP students and interns and provided some influence on the choice of dietetics as a college major. The majority of respondents, however, were not involved in home economics-related organizations or activities, thus indicating that home economics is not the area most appealing to those choosing dietetics as a career.

Most students/interns chose dietetics after another career choice and usually made their decision during the second year of college or later. High school experiences were not influential, for the most part, and a high school counselor rarely was an influence on the selection of dietetics as a career. Perhaps high school counselors are not fully aware of the opportunities in dietetics and are not providing this information

to students. Certain career literature materials on the dietetic profession are available; however, effort should be made to circulate these materials more effectively and update the literature to reflect more accurately the many possibilities open to dietitians. According to the 1984 Study Commission on Dietetics, these materials should be appealing to dynamic and progressive students in order to attract them for leadership roles in the "revitalized profession envisioned for the future."

Other efforts could be made by dietetic professionals to interest high school students in pursuing a career in dietetics. For example, dietitians could speak to high school classes and clubs, organize weight loss programs for interested students, and consult high school athletes. In addition, dietitians could increase their visibility by writing timely articles for local newspapers or appearing on broadcast media. Nutrition- and dietetic-related materials and information were found to be one source of influence on the selection of dietetics as a career for the CUP students and interns.

Because most of the decisions to major in dietetics were made during college, recruitment efforts and career guidance are important at the collegiate level, as well. College faculty and academic advisers were found to be helpful to the CUP students and interns in their career choice. A college foods and nutrition class also was an influence, indicating that an introductory class in nutrition, intended for nonmajors, has great potential for attracting students to the dietetic program.

Although most students/interns had not received dietetic services personally, for those who reported having had this experience, it was an important influence on career choice. Several students/interns made

comments that they had a weight problem or an eating disorder and, thus, became interested in a career in dietetics.

Interestingly, a sizeable number of respondents had previously chosen a health profession as a career if dietetics was a later choice and about two-thirds had a relative in a health profession. These data help to identify a group of students who potentially might enter dietetics because of their knowledge of the healthcare system--through a previous career choice or contact with a relative. Efforts should be expended to provide career guidance materials to other health professions and continue to define the dietitian's role on the healthcare team.

The ADA Dietetic Manpower Demand Study, which estimated the demand for dietetic practitioners and identified areas of potential development in dietetics, provided important data for the future planning of the dietetic profession. The current study among CUP students and interns provided insight into the interests and aspirations of future dietitians, also furnishing important data for planning. The Demand Study projected a "probable" increase in the demand for nutrition education for the public outside of clinical settings (e.g., promotion of wellness, media presentation). This area of practice was particularly appealing to the CUP students and interns, which indicates that the demand in this area will likely be met by these future practitioners. An increased demand also was predicted for dietitians in private practice--the most appealing position as a long-term career objective reported by the students and interns. These data are encouraging, indicating that the defined growth areas of dietetics are also the areas that future dietitians are making plans to enter.

Additional areas, defined by the Demand Study as likely growth areas, are in the commercial industry and in the management of clinical nutrition services. These positions, however, were less appealing to the CUP students and interns. The management career interest score indicated limited appeal for the respondents in management-related positions in healthcare, colleges, or school foodservice. These findings are of concern, as a strong management orientation has been identified as a necessity for the professional survival of dietitians.

The respondents also did not place importance on the following career characteristics: opportunity to direct work of others and opportunity to help in policy-making. These two aspects of a career are important leadership characteristics and leaders in the profession have stressed that dietitians must have management skills and should be influential. Effort should be made to emphasize the importance of management to the dietetic profession and publicize career opportunities in the area of management. Little interest also was shown by the students/interns in a position in college teaching, but the Demand Study forecasted no change, or a possible decrease in demand, in education institutions because of demographic trends affecting school enrollments and a decline in state and federal support.

Although traditional positions in dietetics, such as a clinical dietitian in a hospital setting, were quite appealing to the CUP students and interns, the newer, more nontraditional positions available to dietitians were equally appealing. Career literature and recruitment materials should emphasize these nontraditional areas in dietetics, and ADA should continue to identify how dietitians might function in these new surroundings. The Dietetic Manpower Demand Study projected an increased demand

for professional activities in marketing, sales, and product development. These areas should be sought out by future dietetic practitioners to meet the demands of the profession.

Ratings on potential career satisfaction indicated that these soon-to-be dietitians had a positive outlook on their future in the profession. Many, however, were concerned about the image of dietitians and tended to agree with critical remarks made by dietetic practitioners. The students and interns saw the opportunities to use intellectual capabilities and to help people as potentially satisfying aspects of a career in dietetics, yet perceived their future salary and prestige as somewhat dissatisfying. Although prestige was considered by the students/interns as the least important characteristic in a career, monetary reward was somewhat more important to the respondents--rating fourth among seven career importance factor scores. To attract competent and ambitious students to the profession, efforts should be made to increase the prestige and salary level of dietitians.

Data from studies such as those reported in this research are needed for education and human resource planning in dietetics. Longitudinal studies should be conducted among dietitians at different career stages and in different practice groups within the profession to assess variables similar to those in this study over time. Also, if efforts are to be made to increase the number of males in the profession, further investigations are needed to study career selection influences on young men entering the profession.

REFERENCES

- (1) Roe, A.: The Psychology of Occupations. New York: John Wiley & Sons, Inc., 1956.
- (2) Tittle, C.K.: Careers and Family: Sex Roles and Adolescent Life Plans. Beverly Hills, CA: Sage Publications, Inc., 1981.
- (3) Dawis, R.V., and Lofquist, L.H.: A Psychological Theory of Work Adjustment. Minneapolis: University of Minnesota Press, 1984.
- (4) Van Maanen, J., and Schein, E.H.: Career development. In Hackman, J.R., and Suttle, J.L., eds.: Improving Life at Work. Santa Monica, CA: Goodyear Publishing Co., Inc., 1977.
- (5) Hall, D.T.: Careers in Organizations. Pacific Palisades: CA: Goodyear Publishing Co., Inc., 1976.
- (6) Townsend, K.R., and Mitchell, M.M.: Effectiveness of recruitment and information techniques in occupational therapy. Am. J. Occup. Therapy 36:524, 1982.
- (7) Fitz, P.A., Posner, B.M., and Baldyga, W.W.: Demand for dietitians: Taking control of the future. J. Am. Dietet. A. 83:68, 1983.
- (8) Stone, P.K., Vaden, A.G., and Vaden, R.E.: Dietitians in the early establishment stage of their careers. I. Career selection and related variables. II. Correlates of career motivation and satisfaction. J. Am. Dietet. A. 79:30 and 37, 1981.
- (9) Nippo, J.W.: Factors influencing dietetics as a career choice among college students. Unpublished M.S. thesis. University of Rhode Island, 1980.
- (10) Fargen, D., Vaden, A.G., and Vaden, R.E.: Hospital dietitians in mid-career. I. Career patterns, interests, and aspirations. II. Continuing education experiences and plans. J. Am. Dietet. A. 81:41 and 47, 1982.
- (11) Aadland, S.C., Dunkelberger, J.E., Molnar, J.J., and Purcell, M.L.G.: Similarities-dissimilarities among students in home economics majors at southern land-grant universities. Home Econ. Res. J. 12:3, 1983.
- (12) Grant, W.V., and Snyder, T.D.: Digest of Education Statistics, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office, 1983.

- (13) U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population. Detailed Population Characteristics. Part I. United States Summary. Washington, DC: U.S. Government Printing Office, 1984.
- (14) Baldyga, W.W.: Results from the 1981 census of The American Dietetic Association. J. Am. Dietet. A. 83:343, 1983.
- (15) Super, D.E.: A developmental theory: Implementing a self-concept. In Montross, D.H., and Shinkman, C.J., eds.: Career Development in the 1980s: Theory and Practice. Springfield, IL: Charles C. Thomas Publisher, 1981.
- (16) Osipow, S.H.: Theories of Career Development. 3rd ed. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983.
- (17) Weinrach, S.G., ed.: Career Counseling: Theoretical and Practical Perspective. New York: McGraw-Hill Book Co., 1979.
- (18) Crites, J.O.: Vocational Psychology: The Study of Vocational Behavior and Development. New York: McGraw-Hill Book Co., 1969.
- (19) Crites, J.O.: Career Counseling: Models, Methods, and Materials. New York: McGraw-Hill Book Co., 1981.
- (20) Parsons, F.: Choosing a Vocation. Boston: Houghton Mifflin Co., 1909.
- (21) Weinrach, S.G.: Trait-and-factor counseling: Yesterday and today. In Weinrach, S.G., ed.: Career Counseling: Theoretical and Practical Perspectives. New York: McGraw-Hill Book Co., 1979.
- (22) Rogers, C.R.: Client-centered Therapy. Boston: Houghton Mifflin Co., 1951.
- (23) Brill, A.A.: Basic Principles of Psychoanalysis. Garden City, NY: Doubleday and Co., Inc., 1949.
- (24) Ginzberg, E., Ginsburg, S.W., Axelrad, S., and Herma, J.L.: Occupational Choice: An Approach to a General Theory. New York: Columbia University Press, 1951.
- (25) Bordin, E.S.: Psychological Counseling. New York: Appleton-Century-Crofts, 1968.
- (26) Carter, H.D.: The development of vocational attitudes. J. Consulting Psychol. 4:185, 1940.
- (27) Super, D.E.: A theory of vocational development. Am. Psychologist 8:185, 1953.
- (28) Super, D.E.: The Psychology of Careers. New York: Harper & Bros., 1957.

- (29) Barrett, T., and Tinsley, H.: Vocational self-concept crystallization and vocational indecision. *J. Counseling Psychol.* 24:301, 1977.
- (30) Tiedeman, D.V.: Decision and vocational development: A paradigm and its implications. *Personnel Guid. J.* 40:15, 1961.
- (31) Krumboltz, J.D.: A social learning theory of career selection. In Montross, D.H., and Shinkman, C.J., eds.: *Career Development in the 1980s: Theory and Practice*. Springfield, IL: Charles C. Thomas Publisher, 1981.
- (32) Krumboltz, J.D., and Schroeder, W.W.: Promoting career planning through reinforcement. *Personnel Guid. J.* 43:19, 1965.
- (33) Holland, J.L.: A theory of vocational choice. *J. Counseling Psychol.* 6:35, 1959.
- (34) Holland, J.L.: *Making Vocational Choices: A Theory of Careers*. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1973.
- (35) Holland, J.L., and Nichols, R.C.: Explorations of a theory of vocational choice: A longitudinal study of change in major field of study. *Personnel Guid. J.* 43:235, 1964.
- (36) Maslow, A.H.: *Motivation and Personality*. 2nd ed. New York: Harper & Row, 1970.
- (37) Caplow, T.: *The Sociology of Work*. New York: McGraw-Hill Book Co., 1954.
- (38) Matthews, E., and Tiedeman, D.V.: Attitudes toward career and marriage and the development of life style in young women. *J. Counseling Psychol.* 11:375, 1964.
- (39) Psathas, G.: Toward a theory of occupational choice for women. *Sociology and Social Res.* 52:253, 1968.
- (40) Zytowski, D.G.: Toward a theory of career development for women. *Personnel Guid. J.* 47:660, 1969.
- (41) Falk, W.W., and Cosby, A.G.: Women's marital-familial statuses and work histories: Some conceptual considerations. *J. Voc. Behav.* 13:126, 1978.
- (42) Hoyt, D.P., and Kennedy, C.E.: Interest and personality correlates of career-motivated and homemaking-motivated college women. *J. Counseling Psychol.* 5:44, 1958.
- (43) Vetter, L., and Lewis, E.C.: Some correlates of homemaking versus career preference among college home economics students. *Personnel Guid. J.* 42:593, 1964.

- (44) Wagman, M.: Interests and values of career- and homemaking-oriented women. *Personnel Guid. J.* 44:794, 1966.
- (45) Rand, L.: Masculinity or femininity: Differentiating career-oriented and homemaking-oriented college freshman women. *J. Counseling Psychol.* 15:444, 1968.
- (46) Munley, P.H.: Interests of career- and homemaking-oriented women. *J. Voc. Behav.* 4:43, 1974.
- (47) Wolfson, K.P.: Career development patterns of college women. *J. Counseling Psychol.* 23:119, 1976.
- (48) Auster, C.J., and Auster, D.: Factors influencing women's choice of nontraditional careers: The role of family, peers, and counselors. *Voc. Guid. Q.* 29:253, 1981.
- (49) U.S. Women's Bureau: Women in nontraditional jobs: A conference guide. Washington, DC: U.S. Government Printing Office, 1978.
- (50) Crawford, J.D.: Career development and career choice in pioneer and traditional women. *J. Voc. Behav.* 12:129, 1978.
- (51) U.S. Department of Health, Education, and Welfare: Earned degrees conferred: 1973-74. Washington, DC: U.S. Government Printing Office, 1976.
- (52) Steinberg, J.A.: Climbing the Ladder of Success in Highheels: Backgrounds of Professional Women. Ann Arbor, MI: UMI Research Press, 1984.
- (53) Rytina, N.F., and Bianchi, S.M.: Occupational reclassification and changes in distribution by gender. *Monthly Labor Rev.* 107 (March): 11, 1984.
- (54) Heilman, M.E.: High school students' occupational interest as a function of projected sex ratios in male-dominated occupations. *J. Applied Psychol.* 64:275, 1979.
- (55) U.S. Department of Labor, Bureau of Labor Statistics: Women at Work: A Chartbook. Washington, DC: U.S. Government Printing Office, 1983.
- (56) Murphy, L., and Bosard, H.: Profile of 1955-56 home economics freshmen. *J. Home Econ.* 48:649, 1956.
- (57) Whitehead, F.E., Osborn, M.O., and Stevens, H.A.: Selected characteristics of majors in home economics, sociology, language, and art. *J. Home Econ.* 57:705, 1965.
- (58) Stout, B.L., Huber, A.L., Babcock, T.M., Lyson, T.A., LeNoir, V.R., and Adams, L.: Influential factors on choice of home economics as a major for black and white women attending land-grant colleges in the southern region. *Home Econ. Res. J.* 9:211, 1981.

- (59) Osborn, B.L., and Avery, C.E.: Curriculum choices of adult women in continuing education: Situational and developmental influences. *Home Econ. Res. J.* 8:88, 1979.
- (60) East, M.: *Home Economics: Past, Present, and Future.* Boston: Allyn & Bacon, 1980.
- (61) Cleveland, S.E.: Personality patterns associated with the professions of dietitian and nurse. *J. Health Human Behav.* 2:113, 1961.
- (62) Cleveland, S.E.: Personality characteristics of dietitians and nurses. *J. Am. Dietet. A.* 43:104, 1963.
- (63) 1984 JOB\$ Survey: The institutional manager: She's better educated--but earns less--than her commercial counterpart. *Restaurants & Institutions* 94(March 14):97, 1984.
- (64) Paulsen, D.: The career commitment of 12th grade girls. Unpublished doctoral thesis. Yale University, 1968.
- (65) Luckey, E.B.: The family: Perspective on its role in development and choice. In Herr, E.L., ed.: *Vocational Guidance and Human Development.* Boston: Houghton-Mifflin, 1974.
- (66) Standley, K., and Soule, B.: Women in male-dominated professions: Contrasts in their personal and vocational histories. *J. Voc. Behav.* 4:245, 1974.
- (67) Trigg, L.J., and Perlman, D.: Social influences on women's pursuit of a nontraditional career. *Psychol. Women Q.* 2:138, 1976.
- (68) Kutner, N.G., and Brogan, D.R.: The decision to enter medicine: Motivations, social support, and discouragements for women. *Psychol. Women Q.* 5:341, 1980.
- (69) McLure, G.T., and Piel, E.: College bound girls and science careers: Perceptions of barriers and facilitating factors. *J. Voc. Behav.* 12:172, 1978.
- (70) Haber, S.: Cognitive support for the career choices of college women. *Sex Roles* 6:129, 1980.
- (71) Wilson, J., Weikel, W.J., and Rose, H.: A comparison of nontraditional and traditional career women. *Voc. Guid. Q.* 31:109, 1982.
- (72) Lunneborg, P.W.: Role model influences of nontraditional professional women. *J. Voc. Behav.* 20:276, 1982.
- (73) Houser, B.B., and Garvey, C.: The impact of family, peers, and educational personnel upon career decision making. *J. Voc. Behav.* 23:35, 1983.
- (74) Blau, P.M., and Duncan, O.D.: *The American Occupational Structure.* New York: John Wiley & Sons, Inc., 1967.

- (75) Marr, E.: Some behaviors and attitudes relating to vocational choice. *J. Counseling Psychol.* 12:404, 1965.
- (76) Crites, J.O.: Parental identification in relation to vocational interest development. *J. Educ. Psychol.* 53:262, 1962.
- (77) Steimel, R.J., and Suziedelis, A.: Perceived parental influence and inventoried interests. *J. Counseling Psychol.* 10:289, 1963.
- (78) Nagely, D.L.: Traditional and pioneer working mothers. *J. Voc. Behav.* 1:331, 1971.
- (79) Helson, R.: Women mathematicians and the creative personality. *J. Consulting Clinical Psychol.* 36:210, 1971.
- (80) Oliver, L.W.: The relationship of parental attitudes and parent identification to career/homemaking orientation in college women. *J. Voc. Behav.* 7:1, 1975.
- (81) Dickerson, K.G., and Hinkle, D.E.: Entering college freshmen still perceive that their parents view men's achievement as more important--a self-perpetuating view? *J. College Student Personnel* 21:344, 1980.
- (82) Weishaar, M.E., Green, B.J., and Craighead, L.W.: Primary influences of initial vocational choices for college women. *J. Voc. Behav.* 18:67, 1981.
- (83) Almquist, E.M., and Angrist, S.S.: Role model influences on college women's career aspirations. In Theodore, A., ed.: *The Professional Woman*. Cambridge, MA: Schenkman Publishing Co., Inc., 1971.
- (84) Astin, H.S.: Career development of girls during high school years. *J. Counseling Psychol.* 15:536, 1968.
- (85) Tangri, S.S.: Determinants of occupational role innovation among college women. *J. Social Issues* 28:177, 1972.
- (86) Ginzberg, E., Berg, I., Brown, C.A., Herma, J.L., Yohalem, A.M., and Gorlick, S.: *Life Styles of Educated American Women*. New York: Columbia University Press, 1966.
- (87) Baruch, G.K.: Maternal career-orientation in relation to parental identification in college women. *J. Voc. Behav.* 4:173, 1974.
- (88) Shein, V.: Fair employment of women through personnel research. *Personnel J.* 51:330, 1972.
- (89) Douvan, E.: The role of models in women's professional development. *Psychol. Women Q.* 1:5, 1976.
- (90) Hoffman, L.W.: Effects of maternal employment on the child: A review of the research. *Dev. Psychol.* 10:204, 1974.

- (91) Hoffman, L.W.: Maternal employment. *Am. Psychologist* 34:859, 1979.
- (92) Stein, A.M., and Bailey, M.M.: The socialization of achievement orientation in females. *Psychol. Bull.* 80:345, 1973.
- (93) O'Donnell, J.A., and Anderson, D.R.: Factors influencing choice of major and career of capable women. *Voc. Guid. Q.* 26:214, 1978.
- (94) Dambrot, F., and Vassel, B.: Women lawyers: The employment status of their mothers and the role models they select. *Psychological Reports* 52:27, 1983.
- (95) Vogel, S.R.: Maternal employment and perception of sex roles among college students. *Dev. Psychol.* 3:384, 1970.
- (96) Smith, E.R.: Desiring and expecting to work among high school girls: Some determinants and consequences. *J. Voc. Behav.* 17:218, 1980.
- (97) Lemkau, J.P.: Men in female-dominated professions: Distinguishing personality and background features. *J. Voc. Behav.* 24:110, 1984.
- (98) Burlin, F.O.: The relationship of parental education and maternal work and occupational status to occupational aspiration in adolescent females. *J. Voc. Behav.* 9:99, 1976.
- (99) Treiman, D.J., and Terrell, K.: Sex and the process of status attainment: Comparison of working women and men. *Am. Sociological Rev.* 40:174, 1975.
- (100) Astin, H.S.: *The Woman Doctorate in America: Origins, Career, and Family.* New York: Russell Sage Foundation, 1969.
- (101) Rosen, B.C., and Aneshensel, C.S.: Sex differences in the educational-occupational expectation process. *Social Forces* 57:164, 1978.
- (102) Anderson, K.L.: Educational goals of male and female adolescents: The effects of parental characteristics and attitudes. *Youth & Society* 12:173, 1980.
- (103) Hadley, R., and Levy, W.: Vocational development and reference groups. *J. Counseling Psychol.* 9:110, 1962.
- (104) McDill, E., and Coleman, J.: Family and peer influences in college plans of high school students. *Sociology Educ.* 38:112, 1965.
- (105) Hollander, J.: Development of a realistic vocational choice. *J. Counseling Psychol.* 14:314, 1967.
- (106) Hoppock, R.: *Occupational Information.* 3rd ed. New York: McGraw-Hill Book Co., 1967.

- (107) Stake, J.E., and Levitz, E.: Career goals of college women and men and perceived achievement-related encouragement. *Psychol. Women Q.* 4:151, 1979.
- (108) Simpson, R.L., and Simpson, I.H.: Occupational choice among career-oriented college women. *Marriage Family Living* 23:377, 1961.
- (109) Almquist, E.M.: Sex stereotypes in occupational choice: The case for college women. *J. Voc. Behav.* 5:13, 1974.
- (110) Zufall, D.L.: Career planning of medical laboratory science students. *Am. J. Med. Tech.* 43:361, 1976.
- (111) Youse, J., and Clark, A.: Curriculum and career: By choice or chance? *Am. J. Med. Tech.* 42:127, 1975.
- (112) Greenfield, L.B., Holloway, E.L., and Remus, L.: Women students in engineering: Are they so different from men? *J. College Student Personnel* 23:508, 1982.
- (113) Behuniak, P., and Gable, R.K.: Sex differences in students' satisfaction with college and attitudes about future employment for five college majors. *J. College Student Personnel* 23:11, 1982.
- (114) Krumboltz, J.D., and Varenhorst, B.: Molders of pupil attitudes. *Personnel Guid. J.* 44:443, 1965.
- (115) Ahrons, C.R.: Counselor's perceptions of career images of women. *J. Voc. Behav.* 8:197, 1976.
- (116) Hurwitz, R.E., and White, M.A.: Effect of sex-linked vocational information on reported occupational choices of high school juniors. *Psychol. Women Q.* 2:149, 1977.
- (117) Donahue, T.J., and Costar, J.W.: Counselor discrimination against young women in career selection. *J. Counseling Psychol.* 24:41, 1977.
- (118) Allison, E., and Allen, P.: Male-female professionals: A model of career choice. *Industrial Relations* 17:333, 1978.
- (119) Mercado, P., and Atkinson, D.R.: Effects of counselor sex, student sex, and student attractiveness on counselors' judgments. *J. Voc. Behav.* 20:304, 1982.
- (120) Harway, M.: Sex bias in educational-vocational counseling. *Psychol. Women Q.* 4:412, 1980.
- (121) Fitzgerald, L.S., and Crites, J.O.: Toward a career psychology of women: What do we know? What do we need to know? *J. Counseling Psychol.* 27:44, 1980.
- (122) Smith, M.L.: Sex bias in counseling and psychotherapy. *Psychol. Bull.* 87:392, 1980.

- (123) Sauter, D., Seidle, A., and Karbon, J.: The effects of high school counseling experience and attitudes toward women's roles on traditional or nontraditional career choice. *Voc. Guid. Q.* 28:241, 1980.
- (124) Talbot, N.D.: Why not more dental students? *J. Dental Educ.* 25:11, 1961.
- (125) Grotevant, H.D., and Durrett, M.E.: Occupational knowledge and career development in adolescence. *J. Voc. Behav.* 17:171, 1980.
- (126) Yanico, B.J.: Students' self-reported amount of information about "masculine" and "feminine" occupations. *Voc. Guid. Q.* 28:344, 1980.
- (127) Post-Kammer, P., and Perrone, P.: Career perceptions of talented individuals: A follow-up study. *Voc. Guid. Q.* 31:203, 1983.
- (128) Noeth, R.J., Engen, H.B., and Noeth, P.E.: Making career decisions: A self-report of factors that help high school students. *Voc. Guid. Q.* 32:240, 1984.
- (129) Goodale, J.G., and Hall, D.T.: Inheriting a career: The influence of sex, values, and parents. *J. Voc. Behav.* 8:19, 1976.
- (130) Pietrofesa, J.J., and Splete, H.: *Career Development: Theory and Research.* New York: Grune & Stratton, Inc., 1975.
- (131) Hoppock, R.: A theory of occupational choice. *Voc. Guid. Q.* 5:152, 1952.
- (132) Herzberg, F., Mausner, B., and Snyderman, B.B.: *The Motivation to Work.* New York: John Wiley & Sons, Inc., 1959.
- (133) Herzberg, F.: *Work and the Nature of Man.* Cleveland: World Publishing Co., 1966.
- (134) Wernimox, P.F.: Intrinsic and extrinsic factors in job satisfaction. *J. Applied Psychol.* 50:41, 1966.
- (135) Ewen, R.B., Smith, P.L., Hulin, C.L., and Locke, E.H.: An empirical test of the Herzberg two-factor theory. *J. Applied Psychol.* 50:544, 1966.
- (136) Gruin, G., Veroff, J., and Feld, S.: *Americans View Their Mental Health.* New York: Basic Books, 1960.
- (137) Jurgensen, C.E.: Selected factors which influence job preferences. *J. Applied Psychol.* 31:553, 1947.
- (138) Singer, S.L., and Stefflre, B.: Sex differences in job values and desires. *Personnel Guid. J.* 32:483, 1954.
- (139) Dipboye, W.J., and Anderson, W.F.: The ordering of occupational values by high school freshmen and seniors. *Personnel Guid. J.* 38:121, 1959.

- (140) Singer, J.N.: Sex differences-similarities in job preference factors. *J. Voc. Behav.* 5:357, 1974.
- (141) Schuler, R.S.: Sex, organizational level, and outcome importance: Where the differences are. *Personnel Psychol.* 28:365, 1975.
- (142) Gade, E.M., and Peterson, G.: Intrinsic and extrinsic work values and the vocational maturity of vocational-technical students. *Voc. Guid. Q.* 26:125, 1977.
- (143) Auster, D.: Occupation values of male and female nursing students. *Sociology Work Occup.* 5:209, 1978.
- (144) Wagman, M.: Sex and age differences in occupational values. *Personnel Guid. J.* 44:258, 1965.
- (145) McCall, M.W., and Lawler, E.E.: High school students' perceptions of work. *Acad. Mgmt. J.* 19:17, 1976.
- (146) Stake, J.E.: Motives for occupational goal setting among male and female college students. *J. Applied Psychol.* 63:617, 1978.
- (147) Saleh, S.D., and Lalljee, M.: Sex and job orientation. *Personnel Psychol.* 22:465, 1969.
- (148) Brief, A.P., Rose, G.L., and Aldag, R.J.: Sex differences in preferences for job attributes revisited. *J. Applied Psychol.* 62:645, 1977.
- (149) Kaufman, D., and Fetters, M.L.: Work motivation and job values among professional men and women: A new accounting. *J. Voc. Behav.* 17:251, 1980.
- (150) Voydanoff, P.: Perceived job characteristics and job satisfaction among men and women. *Psychol. Women Q.* 5:177, 1980.
- (151) Rosenberg, M.: *Occupations and Values*. Glencoe, IL: Free Press, 1957.
- (152) Richardson, M.S.: The dimensions of career and work orientation in college women. *J. Voc. Behav.* 5:161, 1974.
- (153) Moore, K.M., and Veres, H.C.: Traditional and innovative career plans of two-year college women. *J. College Student Personnel* 17:34, 1976.
- (154) Perrone, P.A.: Values and occupational preferences of junior high school girls. *Personnel Guid. J.* 44:253, 1965.
- (155) Kohn, M.L.: *Class and Conformity: A Study in Values*. Homewood, IL: Dorsey Publishing Co., 1969.

- (156) Gruenberg, B.: The happy worker: An analysis of educational and occupational differences in determinants of job satisfaction. *Am. J. Sociology* 86:247, 1980.
- (157) Berkowitz, L.: *A Survey of Social Psychology*. 2nd ed. New York: Holt, Rinehart, & Winston, 1980.
- (158) Homans, G.D.: *Social Behavior: Its Elementary Forms*. 2nd ed. New York: Harcourt, Brace, & Jovanovich, 1974.
- (159) Walster, E., Bersheid, E., and Walster, G.W.: New directions in equity research. In Berkowitz, L., and Walster, E., eds.: *Equity Theory: Toward a General Theory of Social Interaction*. New York: Academic Press, 1976.
- (160) Carney, M., and Morgan, C.S.: Female college persisters: Nontraditional versus traditional career fields. *J. College Student Personnel* 22:418, 1981.
- (161) Vroom, V.H.: *Work and Motivation*. New York: John Wiley & Sons, Inc., 1964.
- (162) Lawler, E.E.: *Motivation in Work Organizations*. Monterey, CA: Brooks/Cole Publishing Co., 1973.
- (163) Bartol, K.M.: Expectancy theory as a predictor of female occupational choice and attitude toward business. *Acad. Mgmt. J.* 19: 669, 1976.
- (164) Mitchell, T.R., and Knudsen, B.W.: Instrumentality theory predictions of students' attitudes towards business and their choice of business as an occupation. *Acad. Mgmt. J.* 16:41, 1973.
- (165) Wheeler, K.G., and Mahoney, T.A.: The expectancy model in the analysis of occupational preference and occupational choice. *J. Voc. Behav.* 19:113, 1981.
- (166) *Directory of Dietetic Programs: 1984*. Chicago: American Dietetic Association, 1983.
- (167) Stone, P.K.: Factors affecting career choice and career satisfaction of dietitians in the early establishment career stage. Unpublished M.S. thesis, Kansas State University, 1980.
- (168) Fargen, D.J.: Career patterns of hospital dietitians in mid-career and implications for continuing education. Unpublished M.S. thesis, Kansas State University, 1980.
- (169) Strange, C.C., and Rea, J.S.: Career choice considerations and sex role self-concept of male and female undergraduates in nontraditional majors. *J. Voc. Behav.* 23:219, 1982.
- (170) Lynch, P.: The sources of career dissatisfaction. *Personnel* 1 (March):32, 1968.

- (171) Hadd, T.L.: Higher managers in Virginia state government. Unpublished Ph.D. thesis, University of Virginia, 1973.
- (172) Gould, S.: Correlates of Career Effectiveness. Paper presented at the Annual Meeting of Academy of Management, Southwest Division, Dallas, March 8-11, 1978.
- (173) Patchen, M.: Participation, Achievement, and Involvement on the Job. Englewood Cliffs, NJ: Prentice-Hall, 1970.
- (174) Schletzer, V.: A study of the predictive effectiveness of the Strong Vocational Interest Blank for job satisfaction. Unpublished Ph.D. thesis, University of Minnesota, 1965.
- (175) Robinson, J.P., Athanasiou, R., and Head, K.B.: Measures of Occupational Attitudes and Occupational Characteristics. Ann Arbor, MI: Institute for Social Research, University of Michigan, 1973.
- (176) McNeil, G.F., Vaden, A.G., and Vaden, R.E.: Satisfied or dissatisfied? Hospital foodservice administrators evaluate their jobs. Hospitals 55 (March 1):106, 1981.
- (177) McNeil, G.F.: Male and female hospital foodservice administrators: Job satisfaction, role conflict, and ambiguity and organizational and professional identification. Unpublished M.S. thesis, Kansas State University, 1979.
- (178) SAS Users Guide. 1882 ed., Cary, NC: SAS Institute, Inc., 1982.
- (179) Harman, W.H.: Modern Factor Analyses. 2nd ed. Chicago: The University of Chicago Press, 1967.
- (180) Nunnally, J.C.: Psychometric Theory. New York: McGraw-Hill Book Co., 1967.
- (181) A new look at the profession of dietetics. Final report of the 1984 Study Commission on Dietetics: Summary and recommendations. J. Am. Dietet. A. 84:1052, 1984.
- (182) Gackenbach, J.: The effect of race, sex, and career goal differences on sex-role attitudes at home and at work. J. Voc. Behav. 12:93, 1978.
- (183) Fitz, P.A., and Baldyga, W.W.: Estimates of the future demand for dietetic services: Results of the Dietetic Manpower Demand Study. J. Am. Dietet. A. 83:186, 1983.
- (184) Budget Procedures Handbook, 1984. Chicago: American Dietetic Association, 1984.
- (185) Owen, A.L.: Challenges for dietitians in a high tech/high touch society. J. Am. Dietet. A. 84:285, 1984.

- (186) Fitz, P.A., Posner, B.M., and Baldyga, W.W.: Demand for dietitians: Taking control of the future. *J. Am. Dietet. A.* 83:68, 1983.
- (187) Argo, J.K.: Work role expectations of clinical dietitians as a function of differing training programs. Unpublished Ph.D. thesis, Emory University, 1982.
- (188) Fruin, M.F.: Perceptions of importance of management aspects of dietetic practice. *J. Am. Dietet. A.* 83:417, 1983.
- (189) Palacio, J.R.: Managerial work in hospital dietetic services: The effect of organizational level and practice area. Unpublished Ph.D. thesis, Kansas State University, 1984.
- (190) Zolber, K.K.: The President's page. *J. Am. Dietet. A.* 81:594, 1982.
- (191) Hoover, L.W.: Enhancing managerial effectiveness in dietetics. *J. Am. Dietet. A.* 82:58, 1983.
- (192) Zallen, E.M.: Linkages between administrative and clinical dietitians. *J. Am. Dietet. A.* 83:415, 1983.

APPENDIXES

APPENDIX A

Initial Mailing to Program Directors Requesting
Participation in Study

(KSU Letterhead)

(Initial letter to program directors requesting
assistance with the study)

October 1983

(address)

Dear (Program director):

We would like your assistance with research we are conducting at Kansas State University (KSU) on the career selection and professional identification of dietetic students and interns. This project is an extension of previous work at KSU on career selection among young professionals in dietetics. For your reference, enclosed are reprints of articles on that research.¹ Also enclosed is a copy of the survey instrument used in the earlier study, which will be modified for the current work.

The objective of the previous research was to study career selection, career satisfaction, and related variables among dietitians in the early career stage. The current study will focus on dietetic students--both in coordinated undergraduate programs (CUPs) and internships.

We need your assistance for the project to be successful. In November, we plan to send packets to directors of CUPs and internships. The mailing will include an explanatory letter and research questionnaire for each student in your program. Your participation in the study will be relatively simple; we are only requesting that you distribute the packets to your students and return the completed questionnaires to us. As will be explained in the cover letter to the students, they should complete the instrument on their own time and return to you in a sealed envelope--no class time will be required. We are asking that program directors return all questionnaires to KSU in one large envelope, which we will provide. This mailing procedure will assist us in reducing costs for postage.

Attached is a reply form regarding your willingness to assist with the study. Also, if you are willing, please indicate the number of students²

¹The Stone et al. (8) two-part article in the Journal of The American Dietetic Association was enclosed.

²The word "intern" was substituted for "student" in the version of the letter sent to internship directors.

in your program so we can mail the correct number of packets. Will you complete the form and return it to us today or in the near future? An envelope with prepaid postage is enclosed to facilitate return of this preliminary form.

We hope you will be able to assist us. This research should yield valuable data for recruitment and career guidance. Each participating program will receive a summary of the results when the study has been completed. Thank you.

Sincerely,

Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

ns

Enclosures

(Reply form for program directors to indicate willingness
to assist with study and number of
students/interns in program)

Program Director: _____

Name of Institution: _____

Institution Address: _____ Phone: _____

1. Would you be willing to assist with this study on career selection
in dietetics?

YES _____ NO _____

2. If yes, please indicate number of students or interns in your program.

Junior CUP students _____

Senior CUP students _____

Interns _____

(KSU) Letterhead)

STUDY OF CAREER CHOICE IN DIETETICS¹

Part I.

1. When did you choose your career of dietetics?
(Check one.)

☐ (1) Before college
☐ (2) First year of college
☐ (3) Second year of college
☐ (4) Other, please specify when

2. a. Was dietetics your first choice as a career?

☐ (1) Yes
☐ (2) No

- b. If you answered No to the last question, what were your other choices for a career?

(1) _____
(2) _____
(3) _____

3. Please indicate the degree to which you believe each of the following sources influenced your decision to select dietetics as a career, using the scale below:

0 - Not applicable
1 - Not an influence
2 - Some influence
3 - Major influence

- ☐ a. Father
☐ b. Mother
☐ c. Brother or sister
☐ d. Other relative (please specify) _____
☐ e. Family friends
☐ f. Own friends
☐ g. High school faculty
☐ h. High school counselor
☐ i. College faculty
☐ j. College career guidance counselor
☐ k. Academic advisor in college
☐ l. Dietetic professionals
☐ m. Literature
☐ n. Abilities or interests
☐ o. Career day (high school or college)
☐ p. Job experience
☐ q. Other, please specify

4. Please rate the degree to which each of the following factors influenced your decision to select dietetics as a career, using the scale below:

1 - Not important
2 - Fairly important
3 - Quite important

- ☐ a. Secure future
☐ b. Advancement potential
☐ c. Good salary
☐ d. Interesting work
☐ e. Social prestige
☐ f. Opportunity for service to society
☐ g. Other, please specify

5. In the space next to each statement, please indicate your agreement or disagreement with the statement according to the following scale:

1 - Strongly agree
2 - Agree
3 - Disagree
4 - Strongly disagree

- ☐ a. I identify strongly with my profession.
☐ b. My chosen profession gives me a sense of well-being.
☐ c. I get a sense of pride from my profession.
☐ d. Compared to other areas of my life, my profession is very important to me.
☐ e. If I were to describe myself to someone, I would probably begin by stating my profession.
☐ f. If I were to rank in importance to me all the things that I do, those things related to my work would be at or near the top.

¹Research instrument from study by Stone et al. (8, 167).

6. How do you feel when you hear someone outside of the profession criticizing the field?

☐ (1) I often agree with the criticism.
☐ (2) It does not bother me.
☐ (3) It makes me a little angry.
☐ (4) It makes me angry most of the time.
☐ (5) It makes me quite angry.

7. How do you react when you hear other dietitians criticizing the profession of dietetics?

☐ (1) I often agree with the criticism.
☐ (2) It does not bother me.
☐ (3) It makes me a little angry.
☐ (4) It makes me angry most of the time.
☐ (5) It makes me quite angry.

8. In general, how often do you tell someone in your immediate family about some things concerning your profession?

☐ (1) Once every few months
☐ (2) About once a month
☐ (3) Several times a month
☐ (4) Once a week or more
☐ (5) Almost daily

9. In general, how often do you tell your friends and acquaintances something about your profession?

☐ (1) Once every few months
☐ (2) About once a month
☐ (3) Several times a month
☐ (4) Once a week or more
☐ (5) Almost daily

10. If you could begin your career over again, how likely would you be to choose the dietetic profession again?

☐ (1) Definitely would choose another profession
☐ (2) Probably would choose another profession
☐ (3) Undecided
☐ (4) Probably would choose dietetics
☐ (5) Definitely would choose dietetics

11. How would you advise a relative who is considering going into the dietetic profession?

☐ (1) Definitely would advise against it
☐ (2) Probably would advise against it
☐ (3) Would neither encourage or discourage it
☐ (4) Probably would encourage it
☐ (5) Definitely would encourage it

12. In the space next to each statement, please indicate your agreement or disagreement with that statement according to the following scale:

1 - Strongly agree
 2 - Agree
 3 - Undecided
 4 - Disagree
 5 - Strongly disagree

- ☐ a. I often feel very good about what I am doing in my profession.
☐ b. Generally, I feel I am achieving my goals in my profession.
☐ c. I do not feel successful in my profession.
☐ d. My efforts in my profession have generally met with success.

Part II.

1. In how many professional organizations or associations do you currently hold memberships. Include membership only in those organizations or associations which require the payment of dues or subscription fees.

Number of organization memberships

2. How many local or district meetings of the professional associations to which you belong have you attended in the last year?

Number of meetings attended

3. How many state or regional conferences or conventions of the professional associations to which you belong have you attended in the past three years?

Number of meetings attended

4. How many national conferences or conventions of the professional associations to which you belong have you attended in the past three years?

Number of meetings attended

5. In general, how frequently do you read the journals and other literature published by the professional associations to which you belong? (Please circle the appropriate number.)

Seldom Always
 1 2 3 4 5 6 7

Part III.

Indicate the importance you attach to each of the following possible characteristics of a career. Please use the following scale:

- 1 - Of minor or no importance
2 - Fairly important
3 - Quite important
4 - Very important

- | | | |
|--|---|--|
| ___ (a) Opportunity to improve comfort or appearance of others | ___ (k) Your prestige on the job | ___ (u) Opportunity to help others find success or happiness |
| ___ (b) Opportunity to direct work of others | ___ (l) Prestige in your profession | ___ (v) Fun and relaxation with colleagues |
| ___ (c) Feeling of achievement | ___ (m) Chance to see results of work | ___ (w) Interesting colleagues |
| ___ (d) Opportunity to be your own boss | ___ (n) Recognition from colleagues | ___ (x) Your prestige in the community |
| ___ (e) Opportunities for promotion | ___ (o) Prospects for future earnings | ___ (y) Personal satisfaction |
| ___ (f) Earnings | ___ (p) Intelligent, competent colleagues | ___ (z) Opportunity to do socially significant tasks |
| ___ (g) Chance to improve skills | ___ (q) Opportunity to help in policy-making | ___ (aa) Feeling of being needed |
| ___ (h) Opportunity to use aptitudes and abilities | ___ (r) Opportunities for travel | ___ (bb) Opportunity to use education |
| ___ (i) Opportunity to use initiative | ___ (s) Opportunity to improve health of others | ___ (cc) Financial security |
| ___ (j) Freedom to use own judgment | ___ (t) Variety of activities required | ___ (dd) Intellectual challenge |
| | | ___ (ee) Opportunity to use learned skills |
| | | ___ (ff) Chance to evaluate own work |

Part IV.

Please consider each of the following items with your career as a dietitian in mind (as opposed to your specific job). Describe your career by indicating how satisfied you are with each aspect using the scale below:

- 1 - Very dissatisfied with career in dietetics
2 - Dissatisfied
3 - Unsure or undecided
4 - Satisfied
5 - Very satisfied

- | | | |
|--|--|---|
| ___ (a) Freedom to use own judgment | ___ (l) Opportunities for travel | ___ (v) Your prestige in the community |
| ___ (b) Prestige in your profession | ___ (m) Opportunity to use education | ___ (w) Earnings |
| ___ (c) Chance to improve skills | ___ (n) Opportunity to use learned skills | ___ (x) Personal satisfaction |
| ___ (d) Fun and relaxation with colleagues | ___ (o) Chance to see results of work | ___ (y) Interesting colleagues |
| ___ (e) Feeling of being needed | ___ (p) Your prestige on the job | ___ (z) Opportunities for promotion |
| ___ (f) Chance to evaluate own work | ___ (q) Variety of activities required | ___ (aa) Prospects for future earnings |
| ___ (g) Opportunity to direct work of others | ___ (r) Opportunity to help in policy-making | ___ (bb) Opportunity to improve health of others |
| ___ (h) Opportunity to use initiative | ___ (s) Opportunity to do socially significant tasks | ___ (cc) Opportunity to use aptitudes and abilities |
| ___ (i) Financial security | ___ (t) Opportunity to help others find success or happiness | ___ (dd) Recognition from colleagues |
| ___ (j) Intellectual challenge | ___ (u) Feeling of achievement | ___ (ee) Opportunity to help others find success or happiness |
| ___ (k) Opportunity to be your own boss | | ___ (ff) Intelligent, competent colleagues |

Part V.

1. Please indicate:
 - ☐ (1) Male
 - ☐ (2) Female
2. Marital status:
 - ☐ (1) Married
 - ☐ (2) Not married
3. What year were you born?
 -
4. Educational background (check the one most appropriate):
 - ☐ (1) Bachelor's degree
 - ☐ (2) Some graduate hours, degree not complete
 - ☐ (3) Master's degree
 - ☐ (4) Two Master's degrees
 - ☐ (5) Graduate hours beyond Master's
 - ☐ (6) Ph.D. degree
5. What was your major field of study for each degree?
 - a. Major field for Bachelor's:
 - ☐ (1) Dietetics, institutional management, or foods and nutrition
 - ☐ (2) Home economics education
 - ☐ (3) Education, other than home economics
 - ☐ (4) General home economics
 - ☐ (5) Other, please specify
 - b. Major field for Master's:
 - ☐ (1) Dietetics
 - ☐ (2) Institutional management
 - ☐ (3) Food science
 - ☐ (4) Nutrition
 - ☐ (5) Public health
 - ☐ (6) Home economics education
 - ☐ (7) Education, other than home economics
 - ☐ (8) Business administration
 - ☐ (9) Other, please specify
6. What was your ADA membership route?
 - ☐ (1) Dietetic internship
 - ☐ (2) Coordinated undergraduate program
 - ☐ (3) Combined dietetic internship-master's degree program
 - ☐ (4) Master's degree with experience or assistantship
 - ☐ (5) Doctoral degree
 - ☐ (6) Dietetic traineeship
 - ☐ (7) Bachelor's degree with experience
 - ☐ (8) Other, please specify
7. a. When did you become a member of ADA?
 - year
 b. Registration status (R.D.):
 - ☐ (1) Registered
 - ☐ (2) Nonregistered
 c. If registered, when did you become registered?
 - year
8. Have you worked continuously in dietetics since becoming a member of ADA?
 - ☐ (1) Yes
 - ☐ (2) No
9. Total number of years of professional practice (both full time and part time) since becoming an ADA member.
 - years
10. Present place of employment (please designate primary place only):
 - ☐ (1) Hospital
 - ☐ (2) University Medical Center
 - ☐ (3) Other Health Care Facility
 - ☐ (4) Commercial and Industry Foodservice
 - ☐ (5) University and Residence Hall Foodservice
 - ☐ (6) School Foodservice
 - ☐ (7) Self Employed
 - ☐ (8) Other, please specify
11. Please check the one classification that best describes your present position.
 - ☐ (1) Director of Department
 - ☐ (2) Head administrative dietitian
 - ☐ (3) Head clinical dietitian
 - ☐ (4) Administrative staff dietitian
 - ☐ (5) Clinical staff dietitian
 - ☐ (6) Generalist (administrative, clinical, and/or teaching responsibilities)
 - ☐ (7) Teaching
 - ☐ (8) Research
 - ☐ (9) Public health or community nutritionist
 - ☐ (10) Consultant
 - ☐ (11) Other, please specify
12. What is your present salary?
 - \$ /year
13. Do you have children?
 - ☐ (1) Yes
 - ☐ (2) No
 If Yes, please indicate number.
 - ☐ Infants (1 year and under)
 - ☐ Preschool children
 - ☐ School age children
14. a. Did you enter dietetic practice immediately or within 4 months following completion of professional requirements (i.e., graduation from coordinated program or completion of internship, etc.)?
 - ☐ (1) Yes
 - ☐ (2) No
 b. If No, what period of time elapsed?
 - months
 c. If No, please indicate reason: (Select the one most appropriate or cite your specific reason.)
 - ☐ (1) Initiated graduate study immediately
 - ☐ (2) No job available in preferred geographic area
 - ☐ (3) Available jobs not of interest to me
 - ☐ (4) Family responsibilities
 - ☐ (5) Spouse's job prevented immediate employment
 - ☐ (6) Didn't want to begin work in profession immediately
 - ☐ (7) Other, please specify

APPENDIX B

Follow-up Correspondence to Program Directors
Regarding Participation in Study

(KSU Letterhead)

(Letter sent to program directors who had agreed to assist
with the study to inform them of the anticipated
date of questionnaire mailing)

November 9, 1983

To: Directors of Programs
in Dietetic Career Study

From: Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

Thank you for agreeing to assist us with the career selection research we are conducting at Kansas State University. We appreciate your prompt response indicating your willingness to assist with the study. This memo is to update you on the progress.

We are pleased--almost 80 percent of the CUPs and internships will be involved in the study. The process of contacting program directors is still in progress, however, and compiling our list of respondents is requiring more time than anticipated. I had indicated previously that our mailing of questionnaires would be sometime in November. We are planning to complete the mailing soon after Thanksgiving--possibly early December. I hope this timing does not present difficulties for you.

Again, thank you for agreeing to assist with our study! You will be hearing from us soon.

(KSU Letterhead)

(Follow-up letter requesting assistance
with the study)

November 2, 1983

To:

From: Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

We need your help! About two weeks ago we sent you a letter requesting your assistance with research we are conducting at Kansas State University on factors affecting career choice of dietetic students--both in coordinated undergraduate programs (CUPs) and internships. An attached form asking for your assistance and the number of students or interns in your program was included.

In the event you did not receive the mailing, let me briefly restate the contents of the letter. We are conducting a study as an extension of previous work at KSU on career selection among young professionals in dietetics. We enclosed reprints of articles on that research and a copy of the survey instrument used--if you did not receive these materials, let us know on the enclosed form.

Your participation in the current study will be relatively simple; we are only requesting that you distribute survey forms to your students or interns and have them return these forms to you for mailing to us in a large envelope. This procedure will reduce mailing costs! No class time will be required. We plan to mail the questionnaire packets in about three weeks.

If you are willing to assist with the study, please complete the attached form and return it to us within a few days. An envelope with prepaid postage is enclosed to facilitate return of this form. As we indicated earlier, this research should yield valuable data for recruitment and career guidance. Each participating program will receive a summary of the results when the study has been completed. Thank you for your assistance.

ns

Enclosures

APPENDIX C

Pretest Evaluation Form

KANSAS STATE UNIVERSITY
Department of Dietetics, Restaurant and Institutional Management

Evaluation of Questionnaire

1. Were the directions on the questionnaire clear? _____ yes _____ no
If no, please indicate suggestions for revisions.
2. Were any of the items difficult to understand? _____ yes _____ no
Please indicate the item number and section for those you consider difficult.
3. Do you have other comments or suggestions?

APPENDIX D

Final Research Instrument



**Department of Dietetics, Restaurant
and Institutional Management**

Justin Hall
Manhattan, Kansas 66506
913-532-5521

December 1983

To: Dietetic Students and Interns

From: Janet L. Helm *QH*
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor *AV*

We need your assistance with research being conducted at Kansas State University (KSU) on career selection of dietetic students and interns. This study is an extension of previous work at KSU on career selection among young professionals in dietetics, which was published in the Journal of The American Dietetic Association in July 1981. The director of your program agreed to assist with the current study by providing data on the number of students or interns in the program and distributing and returning questionnaires to us.

Please complete the questions on the following pages and seal the completed survey in the attached envelope. Your program director has a large envelope for returning all the questionnaires to us. This procedure will provide anonymity of your responses and also will assist us in reducing costs for postage.

An identification number for your program is recorded on each survey form to permit summarizing results by program. Your name will not be linked to your individual responses in any way. Please be frank with your answers to all items.

We appreciate your time and efforts in completing the questionnaire. Please return the completed survey in the sealed envelope to your program director within a few days. We do encourage you to respond to all questions in order for data to be complete.

Thank you for your help in this worthwhile study. The research should yield valuable data for recruitment and career guidance in dietetics. Each participating program will receive a summary of the results when the study has been completed.

STUDY OF CAREER CHOICE IN DIETETICS

PART I

1. Please indicate:

- ☐ (1) Female
☐ (2) Male

2. Marital status:

- ☐ (1) Married
☐ (2) Not married

3. a. Do you have children

- ☐ (1) Yes
☐ (2) No

b. If yes, please indicate number.

- ☐ Infants (1 year and under)
☐ Preschool children
☐ School age children

4. What year were you born? _____

5. What is your classification?

- ☐ (1) Junior
☐ (2) Senior
☐ (3) Intern

PART II

1. When did you choose dietetics as a career?
(Check one.)

- ☐ (1) Before college
☐ (2) First year of college
☐ (3) Second year of college
☐ (4) Other, please specify when: _____

2. a. Other than "fantasy choices" of childhood, was dietetics your first serious career commitment?

- ☐ (1) Yes
☐ (2) No

b. If no, what were your previous career choices?

- ☐ (1) _____
☐ (2) _____
☐ (3) _____

3. Please indicate the degree to which you believe each of the following people influenced your decision to select dietetics as a career, using the scale below:

- 0 Not applicable.
 1 Not an influence in this decision.
 2 Some influence; although the choice was mine, this person offered welcomed support.
 3 Major influence; this person's active encouragement was an important factor in my decision.

- ☐ a. Father
☐ b. Mother
☐ c. Brother or sister
☐ d. Other relative
☐ e. Family friends
☐ f. High school friends
☐ g. High school teacher (please specify class taught) _____
☐ h. High school counselor
☐ i. College counselor
☐ j. College faculty member
☐ k. Academic adviser in college
☐ l. Students in the dietetic program
☐ m. Other college friends
☐ n. Dietetic professionals
☐ o. Other healthcare professionals
☐ p. Other, please specify: _____

4. Of the above, who had the greatest influence on your selection of a major?

5. a. Do you have a relative(s) who is a dietitian?

- ☐ (1) Yes
☐ (2) No

b. If yes, please identify:

6. a. Do you have a relative(s) who is in another health profession?

- ☐ (1) Yes
☐ (2) No

b. If yes, please identify:

Relationship	Type of health profession
_____	_____
_____	_____
_____	_____

7. When making the decision to major in dietetics, indicate the degree of importance you assigned to each of the following considerations, using the scale below:

- 1 Didn't consider
 2 Of some importance
 3 Very important

- ☐ a. The dietetic program would be intellectually challenging for me.
☐ b. The major would provide an outlet for my interests and the things I like to do.
☐ c. The potential job opportunities in the field seem compatible with my future personal plans.
☐ d. Dietetics is accepted in our society as an appropriate career opportunity for women.
☐ e. It is possible to combine family roles with a career in dietetics.

3. Please rate the degree to which each of the following factors influenced your decision to select dietetics as a career, using the scale below.

- 1 Not important
 2 Fairly important
 3 Quite important

- ☐ a. Secure future.
☐ b. Advancement potential.
☐ c. Good salary.
☐ d. Interesting work.
☐ e. Social prestige.
☐ f. Opportunity for service to society.
☐ g. Other, please specify: _____

9. Please indicate which of the following experiences you have had by circling "yes" or "no." For "yes" answers, also rate their influence on your decision to select dietetics as a career.

Experiences	Had experience?		If "yes," degree of career influence		
	Circle YES or NO		Not Important	Some Importance	Very Important
a. Worked as an aide or volunteer in a healthcare setting.	YES	NO	___	___	___
b. A family member or friend received dietetic services.	YES	NO	___	___	___
c. Self (as patient) received dietetic services.	YES	NO	___	___	___
d. Read books, magazines, or newspaper articles related to dietetics and nutrition.	YES	NO	___	___	___
e. Attended a career day in high school or college.	YES	NO	___	___	___
f. Received information on the opportunities in dietetics from a knowledgeable person.	YES	NO	___	___	___
g. Worked in a foodservice operation.	YES	NO	___	___	___
h. Have talent or interest in cooking and food preparation.	YES	NO	___	___	___
i. Enjoyed and/or excelled in science courses in high school.	YES	NO	___	___	___

PART III

1. What is the highest degree that your parents received?

0 No degree or diploma
 1 High school diploma
 2 Associate degree
 3 Bachelor's degree
 4 Master's degree
 5 Professional degree (M.D., D.D.S., etc.)
 6 Earned doctorate (Ph.D., Ed.D., etc.)

___ a. Father
 ___ b. Mother

2. What is your father's occupation?

3. a. What is your mother's occupation?

- b. What is your mother's employment status?

___ (1) Currently employed full-time.
 ___ (2) Currently employed part-time.
 ___ (3) Not employed outside home.

4. Please check the statement most applicable to you.

___ (1) Mother has almost always worked outside home.
 ___ (2) Mother started work after children were in school.
 ___ (3) Mother quit work and never returned after children were born.
 ___ (4) Mother has worked off and on.
 ___ (5) Mother has never worked.
 ___ (6) Other, please specify: _____

5. Indicate the size of your high school graduating class.

___ (1) Less than 50
 ___ (2) 50 to 149
 ___ (3) 150 to 399
 ___ (4) 400 or more students

6. While enrolled in high school, did you participate in any of the following activities?

0 Not available
 1 Did not participate
 2 Participated as a member
 3 Participated as a leader or officer
 ___ a. 4-H
 ___ b. Future Homemakers of America (FHA)
 ___ c. Science clubs and/or science fairs
 ___ d. Student council, student government, political club
 ___ e. Honoraries, such as National Honor Society
 ___ f. Debate and/or forensics

7. What was your high school grade point average (4.0 scale)?

8. Please check all of the following courses you completed in high school.

___ (1) Anatomy/physiology
 ___ (2) Biology
 ___ (3) Chemistry
 ___ (4) Physics
 ___ (5) Foods
 ___ (6) Other home economics courses
 ___ (7) Computer science
 ___ (8) Advanced algebra
 ___ (9) Calculus
 ___ (10) Trigonometry

9. a. Did one course in high school, more than any other course, influence your decision to choose dietetics as your major in college?
 ____ (1) Yes
 ____ (2) No
 b. If yes, please specify:

10. a. Did a course in college influence your decision to major in dietetics?
 ____ (1) Yes
 ____ (2) No
 b. If yes, please specify:

11. What is your college grade point average (4.0 scale)?

12. Indicate the activities in which you have participated during college.
 0 Not applicable
 1 Did not participate
 2 Participated as a member
 3 Participated as a leader or officer
 ____ a. College 4-H and/or FHA
 ____ b. Home economics council
 ____ c. College-level council (not home economics)
 ____ d. Student senate
 ____ e. Honoraries or honor societies
 ____ f. Departmental clubs
 ____ g. Sorority or fraternity
13. Please indicate professional society and association memberships you hold. (Please check.)
 ____ (1) AHEA student member
 ____ (2) ADA junior member
 ____ (3) SNE student member
 ____ (4) Other, please specify:

14. a. As a student or intern, do you attend district or local dietetic association meetings? (Check one.)
 ____ (1) Yes, regularly
 ____ (2) Usually, but miss on occasion
 ____ (3) Not very often
 ____ (4) Have not attended
 b. How many state dietetic association meetings have you attended?

 c. How many national ADA meetings have you attended?

 d. Have you attended state or national meetings of allied associations (e.g., SNE, AHEA)?
 ____ (1) Yes
 ____ (2) No

PART IV

1. a. Do you have plans for graduate study?
 ____ (1) Yes
 ____ (2) No
 b. If yes, when do you anticipate beginning graduate study?
 ____ (1) Not sure
 ____ (2) Immediately after completing CUP or internship
 ____ (3) Within 1-2 years
 ____ (4) Within 3-5 years
 ____ (5) Other, please specify:

 c. What is your primary area of interest for graduate study? Record 1 for first choice and 2 for second choice.
 ____ (1) Nutrition
 ____ (2) Clinical dietetics
 ____ (3) Foodservice or institutional management
 ____ (4) Food science/technology
 ____ (5) Public health/community nutrition
 ____ (6) Education
 ____ (7) Business administration
 ____ (8) Other, please specify:

2. What is the highest degree you anticipate receiving?
 ____ (1) Bachelor's
 ____ (2) Master's
 ____ (3) Doctorate
 ____ (4) Other, please specify:

3. a. If you have no immediate plans for graduate study, do you plan to enter dietetic practice after graduation?
 ____ (1) Yes
 ____ (2) No
 ____ (3) Not applicable, plan to initiate graduate study
 b. If yes, in what area of practice would you prefer to work for your initial job? Please rank, beginning with 1 for first choice and 7 for your last choice.
 ____ a. Clinical dietetics
 ____ b. Foodservice management (hospital, school, college, or commercial)
 ____ c. Public health or community nutrition
 ____ d. Generalist (position combining administrative and clinical)
 ____ e. Private practice or consulting
 ____ f. Business/industry
 ____ g. Media/communications

4. Indicate what you anticipate your employment status will be five years from now (column 1) and 10 years from now (column 2). Please check one in each column.

	Column 1 Status in 5 years	Column 2 Status in 10 years
a. Regularly employed in dietetics on a full-time basis.	☐	☐
b. Regularly employed in dietetics on a part-time basis.	☐	☐
c. Employed, full- or part-time in a field related to dietetics.	☐	☐
d. Employed, full- or part-time, in some other field.	☐	☐
e. Out of the work force, at least temporarily.	☐	☐
f. Attending graduate school.	☐	☐
g. Uncertain of plans.	☐	☐

5. a. Opportunities available to skilled and experienced dietitians are listed below. Please indicate the degree to which each has appeal for you as a long-term career objective by recording the appropriate code number.

Code: 0 Of no appeal
1 Mildly appealing
2 Quite appealing
3 Very appealing

- ☐ a. Director of dietetic department
- ☐ b. Head administrative dietitian
- ☐ c. Head clinical dietitian
- ☐ d. Clinical specialist (metabolic disorders, nephrology, oncology, etc.)
- ☐ e. Research dietitian
- ☐ f. Internship director
- ☐ g. Director of a coordinated undergraduate program (CUP)
- ☐ h. College or university faculty
- ☐ i. School foodservice director
- ☐ j. College or university residence hall foodservice director
- ☐ k. Private practice/nutrition counseling
- ☐ l. Healthcare facility consultant
- ☐ m. Public health/community nutritionist
- ☐ n. Dietitian in business or industry
- ☐ o. Nutrition writer, food editor
- ☐ p. Public relations specialist
- ☐ q. Executive or manager for a contract food company (ARA, Saga, etc.)
- ☐ r. Commercial foodservice manager
- ☐ s. Other, please specify: _____

- b. From the list above record the letter for the job title that best represents a professional ideal for you.
- _____

PART V

1. In the space next to each statement, please indicate your agreement or disagreement with the statement, according to the following scale:

- 1 Strongly agree
- 2 Agree
- 3 Disagree
- 4 Strongly disagree

- ☐ a. I identify strongly with my profession.
- ☐ b. My chosen profession gives me a sense of pride.
- ☐ c. Compared to other areas of my life, my chosen profession is very important to me.
- ☐ d. If I were to describe myself to someone, I would probably begin by stating my chosen profession.
- ☐ e. If I were to rank in importance to me all the things that I do, those things related to my profession would be at or near the top.

2. How do you feel when you hear someone outside of the profession criticizing the field?

- ☐ (1) I often agree with the criticism.
- ☐ (2) It does not bother me.
- ☐ (3) It makes me a little angry.
- ☐ (4) It makes me angry most of the time.
- ☐ (5) It makes me quite angry.

3. How do you react when you hear other dietitians criticizing the dietetic profession?

- ☐ (1) I often agree with the criticism.
- ☐ (2) It does not bother me.
- ☐ (3) It makes me a little angry.
- ☐ (4) It makes me angry most of the time.
- ☐ (5) It makes me quite angry.

4. In general, how often do you tell someone in your immediate family about your education in dietetics?

- ☐ (1) Once every few months.
- ☐ (2) About once a month.
- ☐ (3) Several times a month.
- ☐ (4) Once a week or more.
- ☐ (5) Almost daily.

5. In general, how often do you tell friends and acquaintances about your chosen profession?

- ☐ (1) Once every few months.
- ☐ (2) About once a month.
- ☐ (3) Several times a month.
- ☐ (4) Once a week or more.
- ☐ (5) Almost daily.

6. If you could begin your education over again, how likely would you be to choose the dietetic profession?

- ☐ (1) Definitely would choose another profession.
- ☐ (2) Probably would choose another profession.
- ☐ (3) Undecided.
- ☐ (4) Probably would choose dietetics.
- ☐ (5) Definitely would choose dietetics.

7. How would you advise a relative or friend who is considering going into the dietetic profession?

- ☐ (1) Definitely would advise against it.
- ☐ (2) Probably would advise against it.
- ☐ (3) Would neither encourage nor discourage it.
- ☐ (4) Probably would encourage it.
- ☐ (5) Definitely would encourage it.

PLEASE TURN OVER TO COMPLETE QUESTIONNAIRE

PART VI

Indicate the importance you attach to each of the following possible characteristics of a career. Please use the following scale:

- 1 Of minor or no importance
- 2 Fairly important
- 3 Quite important
- 4 Very important

- | | | |
|--|---|--|
| ___ (a) Opportunity to improve comfort or appearance of others | ___ (k) Your prestige on the job | ___ (u) Opportunity to help others find success or happiness |
| ___ (b) Opportunity to direct work of others | ___ (l) Prestige in your profession | ___ (v) Fun and relaxation with colleagues |
| ___ (c) Feeling of achievement | ___ (m) Chance to see results of work | ___ (w) Interesting colleagues |
| ___ (d) Opportunity to be your own boss | ___ (n) Recognition from colleagues | ___ (x) Your prestige in the community |
| ___ (e) Opportunities for promotion | ___ (o) Prospects for future earnings | ___ (y) Personal satisfaction |
| ___ (f) Earnings | ___ (p) Intelligent, competent colleagues | ___ (z) Opportunity to do socially significant tasks |
| ___ (g) Chance to improve skills | ___ (q) Opportunity to help in policy-making | ___ (aa) Feeling of being needed |
| ___ (h) Opportunity to use aptitudes and abilities | ___ (r) Opportunities for travel | ___ (bb) Opportunity to use education |
| ___ (i) Opportunity to use initiative | ___ (s) Opportunity to improve health of others | ___ (cc) Financial security |
| ___ (j) Freedom to use own judgment | ___ (t) Variety of activities required | ___ (dd) Intellectual challenge |
| | | ___ (ee) Opportunity to use learned skills |
| | | ___ (ff) Chance to evaluate own work |

PART VII

Given your knowledge of the dietetic profession, how would you rate each of the following in terms of potential sources of career satisfaction in dietetics? Please use the following scale:

- 1 Very dissatisfied
- 2 Dissatisfied
- 3 Unsure or undecided
- 4 Satisfied
- 5 Very satisfied

- | | | |
|--|--|---|
| ___ (a) Freedom to use own judgment | ___ (l) Opportunities for travel | ___ (v) Your prestige in the community |
| ___ (b) Prestige in your profession | ___ (m) Opportunity to use education | ___ (w) Earnings |
| ___ (c) Chance to improve skills | ___ (n) Opportunity to use learned skills | ___ (x) Personal satisfaction |
| ___ (d) Fun and relaxation with colleagues | ___ (o) Chance to see results of work | ___ (y) Interesting colleagues |
| ___ (e) Feeling of being needed | ___ (p) Your prestige on the job | ___ (z) Opportunities for promotion |
| ___ (f) Chance to evaluate own work | ___ (q) Variety of activities required | ___ (aa) Prospects for future earnings |
| ___ (g) Opportunity to direct work of others | ___ (r) Opportunity to help in policy-making | ___ (bb) Opportunity to improve health of others |
| ___ (h) Opportunity to use initiative | ___ (s) Opportunity to do socially significant tasks | ___ (cc) Opportunity to use aptitudes and abilities |
| ___ (i) Financial security | ___ (t) Opportunity to improve comfort or appearance of others | ___ (dd) Recognition from colleagues |
| ___ (j) Intellectual challenge | ___ (u) Feeling of achievement | ___ (ee) Opportunity to help others find success or happiness |
| ___ (k) Opportunity to be your own boss | | ___ (ff) Intelligent, competent colleagues |

.

APPENDIX E

Correspondence to Program Directors with
Research Instruments

(KSU Letterhead)

(Letter to program directors accompanying packet of
questionnaires for students/interns)

December 1983

To: Directors of Programs
in Dietetic Career Study

From: Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

Thank you for your assistance with the research being conducted at Kansas State University on dietetic career selection. Enclosed is the appropriate number of questionnaires for your program; a copy of the questionnaire is attached to this memo for your files.

Please distribute the questionnaires to each of your students or interns. An explanatory letter is printed on the first page of the survey form; attached to the questionnaire is a small envelope for returning the questionnaires to you. Please remind your students or interns to seal the envelope after completion of the survey to ensure confidentiality. An identification number is recorded on each survey form to permit linking of the responses to your program. Individual names of respondents will not be recorded.

After the questionnaires from all students or interns (or those willing to participate) are returned to you in the sealed envelopes, please place them in the enclosed large envelope with prepaid postage and return to us. Also, please complete the enclosed yellow form to confirm the number of students or interns and return with the questionnaires. If any individual students/interns complete questionnaires after the packet has been returned to KSU, please ask that the survey be sent directly to:
Janet Helm
104 Justin
Kansas State University
Manhattan, KS 66506

We hope to receive most of the responses before Christmas, if at all possible. If this is not possible, please return questionnaire as soon after the holidays as schedules permit.

Thank you! As indicated earlier, we will share a summary of the results. We anticipate completing the study in May. Please express appreciation to your students or interns for us.

ns

Enclosures

(Form accompanying questionnaire packets for program directors to confirm the number of students/interns in program)

KANSAS STATE UNIVERSITY
Department of Dietetics, Restaurant and Institutional Management

DISTRIBUTION OF DIETETIC CAREER STUDY
QUESTIONNAIRES FORM

Records from previous report indicate the following number of students/
interns in your program:

_____ juniors
_____ seniors
_____ interns

Is this number correct? _____ yes
_____ no

If no, please record the corrected number:

_____ juniors
_____ seniors
_____ interns

Did you distribute questionnaires to all students/interns in your
program:

_____ yes
_____ no

If no, please record number distributed:

_____ juniors
_____ seniors
_____ interns

APPENDIX F

Follow-up and Acknowledgment Correspondence to Program Directors

(KSU Letterhead)

(Letter sent to program directors after
receipt of questionnaires)

January 20, 1984

To: Directors of Programs
in Dietetic Career Study

From: Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

Thank you for your assistance with our research on dietetic career selection. We have received the completed questionnaires from your program and appreciate your time and efforts in distributing and collecting the surveys. It obviously was a busy time of the year!

If all of the questionnaires were not returned, please ask your students or interns who completed the questionnaires after the program packet was mailed to return their form to the following address:

Janet L. Helm
104 Justin Hall, KSU
Manhattan, KS 66506

Our response rate has been excellent. Almost all of the accredited CUPs and internships are taking part in the study. We should have a large pool of data from almost 2,500 dietetic students and interns. We are excited about the study and believe it will yield relevant information for the profession.

As indicated earlier, we will share a summary of the results. We anticipate completing the study in the summer. Please express appreciation to your students or interns for us.

(KSU Letterhead)

(Follow-up letter requesting completed questionnaires; sent to program directors who had agreed to assist with the study)

February 3, 1984

To: Directors of Programs
in Dietetic Career Study

From: Janet L. Helm
Graduate Research Assistant

Allene G. Vaden, Ph.D., R.D.
Professor

We hope your holidays were both enjoyable and relaxing. The time flew by so swiftly; it is hard to believe that another semester has begun!

We realize the timing of our mailing of the dietetic career surveys was not ideal. Many of the programs probably were near the end of the semester or were already on vacation. We know that classes have just recently resumed, but we wanted to remind you to please distribute the surveys to your students or interns. Also, we want to acknowledge that several program directors indicated the forms would not be distributed until after the holidays. Should you need additional forms, please contact us.

Our response rate has been excellent and we want to receive as many completed questionnaires as possible. Almost all of the accredited CUPs and internships agreed to participate and we should have data from almost 2,500 students and interns! If any individual students/interns complete questionnaires after the program packet has been returned to us, please ask that the surveys be sent to the following address:

Janet Helm
104 Justin Hall, KSU
Manhattan, KS 66506

Thank you very much for agreeing to assist us with our research. As indicated earlier, we will share a summary of the results with all participating programs. We anticipate completing the study this summer. Please express our appreciation to your students or interns.

APPENDIX G

Supplemental Table (Table 49)

Table 49. F values from analysis of effects of independent variables on research measures¹

		independent variable ⁴		
item no. ²	research measure ³	group	professional identification	home economics orientation
II.3. sources of influence on career decision				
a.	father	.56	10.82***	.81
b.	mother	5.03*	26.07***	.37
c.	brother/sister	5.05*	3.38	.11
d.	other relative	4.79*	.85	4.90*
e.	family friends	.54	19.06***	.22
f.	high school friends	1.23	3.76	1.18
g.	high school teacher	1.40	1.17	45.42***
h.	high school counselor	1.87	.01	5.72*
i.	college counselor	4.02*	2.90	4.22*
j.	college faculty member	32.90***	8.06**	2.67
k.	academic adviser in college	78.66***	12.35***	8.69***
l.	students in dietetic program	18.60***	7.12**	4.50*

¹Results from general linear model analysis of variance for effects of three independent variables on several dependent variables.

²Refers to the part (I-VII) and item number in the research instrument, which is included in Appendix D.

³Refer to Table 2 in methodology for scoring of research measures.

⁴Independent variables--

Group: CUP--juniors or seniors in coordinated undergraduate programs

Intern--students in dietetic internship programs

Professional identification: Groups defined as low or high based on score computed from sum of 6 items.

Low = scores < mean

High = scores $\geq$ mean

Home Economics orientation: Groups defined as low or high based on score computed from reports of home economics-related experiences.

Low = scores < mean

High = scores $\geq$ mean

* $P < .05$

** $P < .01$

*** $P < .001$

Table 49. (cont.)

item no.	research measure	independent variable		
		group	professional identification	home economics orientation
m.	other college friends	4.05*	2.57	.20
n.	dietetic professionals	.77	23.79***	3.25
o.	other healthcare professionals	.66	6.52**	2.39
II.7. considerations in career decision				
a.	intellectual challenge	13.51***	18.31***	.13
b.	outlet for interests	2.11	14.92***	.20
c.	compatible with future plans	9.92**	14.55***	9.29**
d.	appropriate opportunity for women	9.20**	.86	12.42***
e.	can combine with family roles	9.90**	12.39***	3.51
II.8. value influences on career decision				
a.	secure future	15.55***	6.29**	10.06**
b.	advancement potential	1.67	19.49***	.32
c.	good salary	28.38***	2.30	11.80***
d.	interesting work	1.89	50.21***	.00
e.	social prestige	5.52*	.73	5.45*
f.	opportunity for service to society	2.97	23.70***	.03
II.9. experiences affecting career decision				
a.	worked as healthcare aide/ volunteer	.74	15.73***	1.14
b.	family/friend received dietetic services	3.00	11.92***	.07
c.	self received dietetic services	.17	2.55	.00
d.	read materials on nutrition/dietetics	.06	10.88***	.40
e.	attended a career day	.92	1.07	1.58
f.	information from knowledgeable person	1.63	27.68***	2.91

Table 49. (cont.)

item no.	research measure	independent variable		
		group	professional identification	home economics orientation
g.	worked in foodservice operation	2.09	27.53***	1.45
h.	talent/interest in food/cooking	.70	12.88***	27.45***
i.	enjoyed/excelled in science	21.37***	1.62	2.87
IV.3b. initial job interest				
a.	clinical dietetics	1.63	14.83***	3.86*
b.	foodservice management	.17	.91	13.58***
c.	public health/community nutrition	4.93*	.36	.05
d.	generalist	10.60***	.11	.02
e.	private practice/consulting	.13	.18	2.92
f.	business/industry	4.39*	3.43	.08
g.	media/communications	1.26*	3.75*	1.56
IV.5a. long-term career objective				
	management (average of items a,b,i,j)	12.77***	3.90*	18.57***
	clinical (average of items c,d,e)	.43	16.84***	.20
	teaching (average of items f,g,h)	7.83**	.06	4.03*
	private practice (average of items k,e)	.08	9.07**	.33
	business/industry (average of items n,o,p,q,r)	.03	.05	8.83**
V.1. career involvement measures				
a.	identify strongly with profession	.57	146.12***	3.82*
b.	profession gives sense of pride	6.35**	158.34***	5.08*
c.	profession very important	4.46*	100.01***	.72
d.	describe myself with profession	9.41**	83.23***	.08
e.	profession near top in importance	.67	72.07***	.70
	career involvement score (Σ of items a-e)	7.09**	208.95***	1.32

Table 49. (cont.)

item no.	research measure	group	independent variable	
			professional identification	home economics orientation
VI.	career importance factor scores ⁵			
	prestige	.29	12.81***	.21
	monetary reward	3.49	.50	1.81
	independence/self-sufficiency	.17	7.09**	.30
	professional challenge	.92	40.32***	.00
	self-realization	3.72	40.06***	.26
	social service	.54	68.19***	3.94*
	social stimulation	5.38*	8.62**	.15
VII.	potential career satisfaction factor scores ⁶			
	professional challenge	4.40*	113.44***	4.23*
	service to others	20.09***	120.35***	7.16**
	financial	61.48***	29.68***	16.55***
	professional power	4.89*	24.32***	4.19*
	prestige	16.82***	39.20***	14.48***
	professional stimulation	1.65	44.72***	.91
	overall potential career satisfaction	23.43***	80.34***	11.77***

⁵Scores derived from principal component analysis of 32 items in part VI.

⁶Scores derived from principal component analysis of 32 items in part VII.

CAREER DECISIONS: AN EXAMINATION OF INFLUENCES ON
SELECTION OF DIETETICS AS A PROFESSION

by

JANET LYNN HELM

B.S., Kansas State University, 1979

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Dietetics, Restaurant
and Institutional Management

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

ABSTRACT

This study investigated factors influencing career selection in dietetics, measured levels of professional identification and commitment, assessed career aspirations, and identified aspects important in a career and potential sources of career satisfaction in dietetics. Junior and senior students in coordinated undergraduate programs in dietetics (CUPs) and interns in dietetic internships were surveyed with the assistance of the program directors who distributed and returned the survey instruments. Directors of all of the 64 CUP programs and 102 of the 105 internships, or 98% of the accredited programs, agreed to participate in the study. A total of 2,033 instruments were returned from CUP students and dietetic interns by the program directors, or 86% of those distributed. Questionnaires were returned from all but two of the programs with directors who initially agreed to assist with the study.

Dietetics was not a first career commitment for the majority of students and interns. Previous career choices (and sometimes careers) included nursing, other allied health professions, and education. Dietetic professionals, mothers, college faculty, and students in a dietetic program had the strongest influence on the decision to select dietetics as a career. High school counselors and high school friends were the least influential. Respondents frequently had worked as an aide in a healthcare setting or in a foodservice operation and perceived this work experience as being important in their career decision. Additional experiences important in the decision to select dietetics included receiving information from a knowledgeable person, reading books and

magazines related to dietetics and nutrition, having an interest in food and food preparation, and enjoying or excelling in high school science courses.

The students and interns saw Professional Challenge, or the opportunity to use intellectual capabilities, as the aspect most promising to be a source of satisfaction in dietetics, followed by Service to Others and Professional Stimulation. The aspects perceived to be least satisfying in their future careers as dietitians were concerned with prestige and salary. A strong service orientation was reflected in ratings of important aspects of a career.

Almost three-fourths planned to pursue graduate study within the next five years. Clinical dietetics and community nutrition were the preferred areas of practice for an initial job in the profession. Most of the students/interns reported they planned to remain in the work force and in the profession when asked about predictions of their status in five and in ten years. In terms of an ideal long-term career objective, they believed that private practice/nutrition counseling, clinical specialist, public health, and business and industry positions held the greatest appeal.

The research provided valuable data for recruitment and career guidance in dietetics. In addition, the results provided insight into the interests and aspirations of future dietitians, furnishing important data for education and human resource planning in the profession.

